

Durham E-Theses

Forensic Citizens: The Politics of Searching for Disappeared Persons in Mexico

CRUZ-SANTIAGO, ARELY

How to cite:

CRUZ-SANTIAGO, ARELY (2017) *Forensic Citizens: The Politics of Searching for Disappeared Persons in Mexico*, Durham theses, Durham University. Available at Durham E-Theses Online:
<http://etheses.dur.ac.uk/12315/>

Use policy

The full-text may be used and/or reproduced, and given to third parties in any format or medium, without prior permission or charge, for personal research or study, educational, or not-for-profit purposes provided that:

- a full bibliographic reference is made to the original source
- a [link](#) is made to the metadata record in Durham E-Theses
- the full-text is not changed in any way

The full-text must not be sold in any format or medium without the formal permission of the copyright holders.

Please consult the [full Durham E-Theses policy](#) for further details.

Academic Support Office, Durham University, University Office, Old Elvet, Durham DH1 3HP
e-mail: e-theses.admin@dur.ac.uk Tel: +44 0191 334 6107
<http://etheses.dur.ac.uk>

Forensic Citizens: The Politics of Searching for Disappeared Persons in Mexico

Arely Cruz Santiago

Thesis submitted for the degree of Doctor of
Philosophy

Department of Geography
Durham University

2017

Abstract

In Mexico, thousands of people have disappeared since 2006 due to the so-called 'War on Drugs'. The government has been unable or unwilling to search and identify many of the disappeared, so families have organised their own searches to locate their loved ones. Through a one year ethnography conducted with relatives searching for their disappeared persons in Mexico, this thesis advances a feminist forensics that not only takes into account attacks inflicted on women, or the lack of female contributions to scientific production, but also looks at Mexico's disappeared, and the contribution their relatives are making to forensic knowledge. The practices, conceptions, and struggles of these relatives of disappeared persons, reveal the politics of forensic science practice amidst mass atrocities. This alternative forensic practice is one in which citizen's active participation in spotting, mapping and delineating possible sites where their relatives might be held captive, are transforming the politics and notions of what constitutes evidence and expertise. The politics of forensic expertise is a thread that runs throughout this thesis, and that connects the diverse ways in which disappearance, materiality and subjectivities reconstitute each other to bring forth what I identify as citizen forensics. Thus, by exploring the way in which private citizens are transformed into forensic investigators after the disappearance of a loved one, I contribute a new understanding to the geographical approach to missingness and disappearance. Throughout this thesis I understand disappearance as a fluid technology, at once a political category, created against the backdrop of state violence and pervading insecurity, and also a constantly shifting practice where signifier and signified collapse. The disappeared, in their constant absent/presences and embodiments in maps, GPS, pictures and databases, challenge the distinctions made between the 'person as such' and cold bureaucratic technologies such as counting, mapping or case-filing procedures.

Table of Contents

Chapter One: Introduction	12
Research Questions and Objectives	16
Missing Persons and Disappearances: From Being Missing, to Being Disappeared — Why Does the Difference Matter?	18
Thesis Structure	26
 Chapter Two: On <i>Forensis</i> and STS	 29
On Science and Knowledge	30
‘Islands of Stability’, ‘Dances of Agency’ and The Mangle	36
Feminist approaches to STS: Embodied and Performative Understandings of Science	39
Forensic Science: Evidence and Law.....	42
DNA Technologies for forensic purposes	46
Forensic Technologies for Victim Identification in Disaster Scenarios and in the aftermath of Human Rights Abuses	50
Disaster Victim Identification (DVI).....	50
Victim identification in the aftermath of political violence: Argentina and the development of human rights forensics	52
The <i>Forum</i> in Forensic Science as a technology of participation.....	59
Concluding Remarks	63
 Chapter Three: On Methods	 66
Why Disappearances in Mexico?.....	67
The ‘Field’: back home.....	69
Geographies of Risk.	73
“‘We are the god-mothers of your thesis”	76
Data Collection	78
Other sources on information.....	80
A Comment on Field notes and Research Diaries.....	81
Who searches for missing persons in Mexico?	82
Fieldsites	84
LOCATEL.....	86
PROVICTIMA: Social Prosecution Office for Attention to Victims of Crimes	87
CEAV: The Executive Commission for Attention to Victims	90
PGR’s: Specialised Unit in the Search of Disappeared Persons (SUSDP)	92
ICRC, International Committee of the Red Cross: the AM/PM database.....	94
SPOSDP: The Special Prosecution Office for the Search of Disappeared Persons	97

INCIFO: National Institute of Forensic Science	99
Epilogue: It could have been me, or the nearness of disappearance.....	100
Concluding Remarks	101
<i>Interlude I</i>	102
Chapter Four: Disappearances and Forensic Expertise in Mexico	105
<i>Feminicidios</i> : Disappearances in the northern part of the country, 1990 – 2000s.....	107
<i>Campo Algodonero</i> : The Cotton Field Case.....	119
Forensic Science in Mexico and the work of Forensic Independent Teams.....	131
72 Migrants in San Fernando Tamaulipas	142
Concluding Remarks	148
<i>Interlude II</i>	151
Chapter Five: Alejandro Alfonso Moreno Baca <i>On Absence</i>	153
Geographies of Absence	156
Alejandro is “Missing”	158
Tracing Alejandro’s absence	165
Being absent with others	173
Absence as fluid technology	180
Concluding Remarks	184
<i>Interlude III</i>	187
Chapter Six: On Becoming	189
Investigative Methodology in “Missing Person” cases: <i>If in doubt, think murder</i>	190
‘Let me tell you the story of who Norma Ledezma was and who Norma Ledezma is now’	194
Internal and External Geographies of Search.....	205
Foucault’s “Technologies of the self” as a mode of <i>desubjectivation</i>	207
Shaping subjectivities	212
Citizens’ Forensic Work in Mexico: ‘Searching for them we find ourselves’	216
‘Radiography of Disappearances’	219
Numbering, Ordering and Numbers	220
Site Specific Searches	224
Drones to reach ‘dangerous/prohibited/unreachable spaces’.....	226
Concluding Remarks	228

<i>Interlude IV</i>	232
Chapter Seven: On Authority, Boundaries and Expertise	233
Case Constructionism and Police Search Strategies	234
Search Strategies in Argentina	235
STS and Citizens' Participation in Science.....	239
Citizens' Engagements with Science: Performing the Boundaries of Forensics in Mexico ..	246
From 27,000 to 43, or Why Ayotzinapa Matters	258
Performing borders in Forensic Science: AM/PM They cannot do it	260
The Amphitheatre in Mexico City: Dead bodies, Touching, Smelling as Proof of Expertise	261
Arguing for Lay Expertise in Mexico: Towards a Feminist Forensic Science	266
Concluding Remarks	268
Chapter Eight: Conclusions	270
Implications and Future Research Agenda	277
References	280

List of Abbreviations

Actor-Network Theory (ANT)

American Association for the Advancement of Science (AAAS)

Asociación de Familiares de Detenidos, Desaparecidos y Víctimas de Violaciones a los Derechos Humanos en México (AFADEM)

Association of Chief Police Officers (ACPO)

Border Industrialization Program (BIP)

Disaster Victim Identification (DVI)

Equipo Argentino de Antropología Forense (EAAF)

Federal Prosecutor Office (PGR)

Forensic Architecture (FA)

Forensic Medical Services (SEMEFO)

Fuerzas Unidas por Nuestros Desaparecidos en Nuevo León (FUNDENL)

Institutional Revolutionary Party, Partido Revolucionario Institucional (PRI)

Inter-American Commission on Human Rights (IACHR)

Inter-American Court of Human Rights (I/A Court H.R.)

International Committee of the Red Cross (ICRC)

Mexican Commission for the Defence and Promotion of Human Rights, Comisión Mexicana de Defensa y Promoción de los Derechos Humanos (CMDPDH)

Missing Persons Bureau (MPB)

Movement for Peace with Justice and Dignity in Mexico, Movimiento por la Paz con Justicia y Dignidad en Mexico (MPJD).

National Border Program, Programa Nacional Fronterizo (PRONAF)

National Commission on Disappeared Persons (CONADEP)

National Commission on Human Rights (CNDH)

National Institute of Anthropology and History (INAH)

National Institute of Forensic Sciences (INCIFO)

North American Free Trade Agreement (NAFTA)

Organization of American States (OAS)

Public Prosecution Service (MP)

Science and Technology Studies (STS)

Sociology of Scientific Knowledge (SSK)

Special Prosecutors Office for Social and Political Movements of the Past in Mexico,
Fiscalía Especializada para Movimientos Sociales y Políticos del Pasado en México
(FEMOSPP)

Statement of Copyright

The copyright of this thesis rests with the author. No quotation from it should be published without the author's prior written consent and information derived from it should be acknowledged.

Acknowledgements

Writing this thesis has been an incredible journey. There were many moments of uncertainty and self-doubt; moments to learn about others and myself, and moments of self-reshaping through this learning process. It was my Dad the first person to mention what doing a doctorate entailed, I was twelve years old. Although in theory I knew what a doctorate was, I did not know how intimate and intense the experience of writing and doing research is; *it transforms you*.

This research would not have been possible without the support and trust of many people. I would like to thank the Mexican families and “godmothers” of my thesis. I am very grateful for the time, knowledge and intimate stories you shared with me. Knowing your stories and that of your sons and daughters has changed me for life.

I have been fortunate enough to carry out my doctoral research as part of the always thought provoking and intellectually challenging Geography Department. I would like to thank my supervisors Prof. Louise Amoore, Dr. Christopher Lawless (SASS) and Prof Robin Williams. Louise, without your support this thesis would not have been possible. Thank you for always encouraging me to pursue my interests, for your patience and for believing in me. You have been a continuous source of inspiration both intellectually and personally. It has been an amazing experience sharing these years with you. Chris, thank you for your careful reading of my drafts and useful insights. Robin, thank you for always believing in my project, for your support throughout these years and for your input in the early stages of my research; your insightful questions and comments have been very useful. My research also benefited from discussions and informal chats with other members of staff here at Durham Geography. Special thanks to Prof. Ben Anderson and Dr. Paul Harrison. Any omissions and mistakes my readers might find in this thesis are my own.

Thanks also to the amazing and super clever community of Durham Geography postgrads. I am very happy to have shared these three and a half years with you all. Special mention go to those with whom I spent most of my time, the Skylab crew: Dr. Lara Bezzina, Dr. Peter Forman, Dr. Andrew Telford, Hanna Ruszczyk, Ramjee Bhandari, and the “oldies” and always supportive friends bearing with my first-year awkwardness Dr. Brendan Doody, Dr. Abi McNiven, Dr. Ruth Machen, Dr. Matt Fin and though not from the highlands of Skylab, Dr. Ankit Kumar, who was always good fun.

Outside Durham, my research benefited from the discussions at the ESRC Research Seminar series on ‘genetics, technology, security and justice. Crossing, contesting and comparing boundaries’. Special thanks to Dr Matthias Wienroth and to Dr. Victor Toom for their friendship, informal chats and insightful comments. I feel very fortunate to have met you.

To my non-geography friends: Guadalupe Abrego —thanks for your friendship and support despite the distance! To my friends in Durham: Diana Chaparro, Jaime Salcido, thanks for the support, love and care you have given me and my family and for always being a good source of Mexican food; to Hector and Jess Sequera; thanks for your friendship, care, and Latin American happiness.

My PhD was financially possible due to a doctoral studentship from the National Council of Science and Technology of Mexico, CONACyT. My fieldwork in Mexico was also supported by a complementary scholarship from the Mexican Board of Education (SEP-DGRI), a travel grant from the Society of Latin American Studies (SLAS), and the ESRC Project ES/M00063X/1. Since English is not my first language, this thesis benefited from the support of Francesca Bratton.

Sections of Chapter 7 have appeared in *Social Research: An International Quarterly* (2016, vol. 83, issue 2) in a paper co-authored with Schwartz-Marin, E.

None of the research and analysis in this thesis would have been possible without the endless support and love provided by my parents: Areli Santiago Sicardo and Jorge Cruz Lopez. Thanks for always believing in me, for giving me shelter and care during my fieldwork and for supporting all my crazy ideas and decisions. Dad, thanks for always procuring that I had access to new ideas, experiences and adventures. Thanks for encouraging me to live my life to the fullest and to keep on dreaming. Mom, writing this research made me realise the different ways in which you have nurtured my life. Thank you for teaching me discipline, how to achieve my goals, and persevere; to always say what I think, and defend my ideas. I want you to know that I have always been silently observing you, and I have learnt more from you than you can ever imagine. To my siblings: Jorge, Binidza and Claudia who have endured my chatty company all these years. Thank you for all your love and support.

I also thank Pinky for her different forms of caring: from attentively reading earlier drafts of this thesis and further develop my English skills; for cooking Mexican food. Thank you.

Finally, to my always-adventurous little family: Camila and Ernesto. Thank you for *everything*. I cannot find the words to tell you how important your care, eternal optimism, laughs, patience and doses of home cooked meals –accompanied by incisive questions have been for me and for the development of this research. You both know how much I love you.

For Camila

Chapter One: Introduction

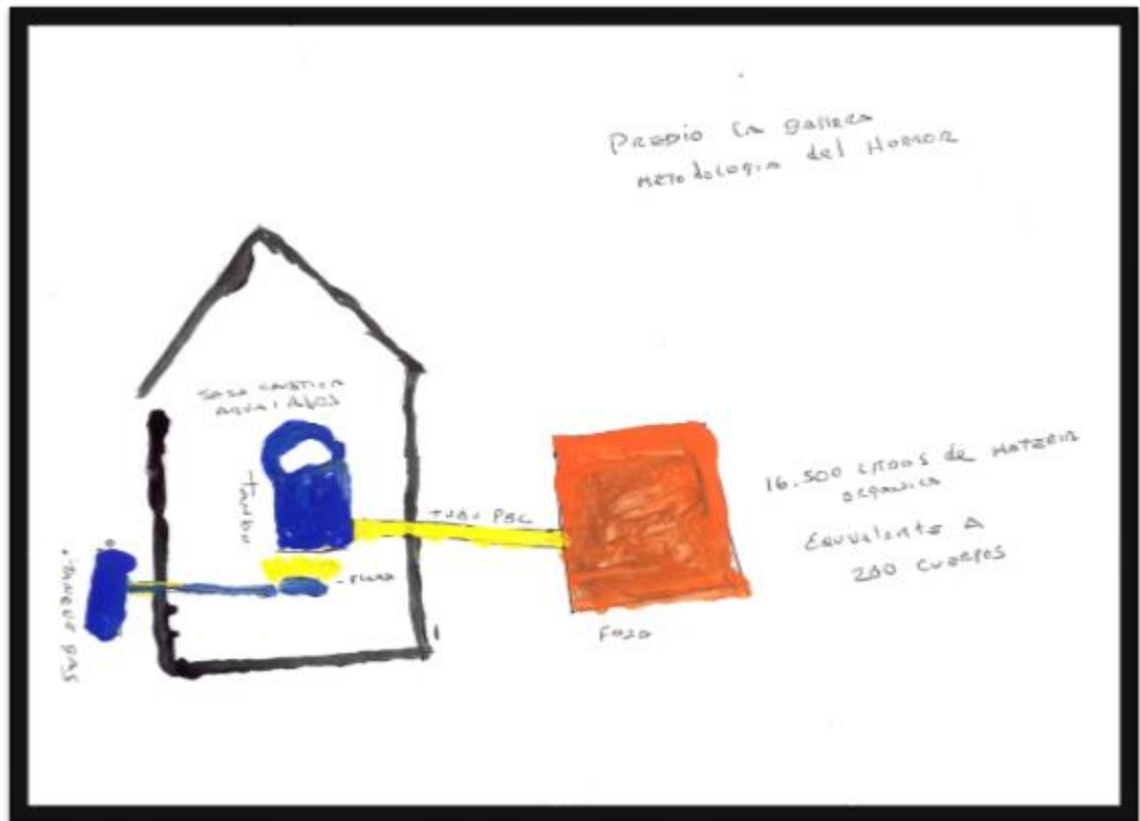


Figure 1 Drawing made by Fernando Ocegueda during the focus group I organised in September 2014.

Well, here I have the methodology of terror. That is what I call it. With all the evidence [gathered], we have located a room inside this property, which was made by engineers, using a system of gravity. A body was thrown inside a barrel, later they threw two caustic soda sacks inside and they turned on the fire and left the body boiling for 24 hours. To avoid the strong smell of chemicals they put some garlic [inside the barrel], because they already know that our meat is similar to pork's meat, so then it smelled like they were cooking another type of food. The gravity system they designed is elevated and then they insert a tube [which takes everything] into a pit, and when the cooking has finished, after 24 hours of boiling the body, they opened the tap, everything went into the pit..., and they do that continuously. Oh! I forgot to say that we found another pit further away and, in total, there were 16,500 litres of organic emulsion, which gives us an approximate number of 200 bodies. When the authority arrived after we contacted them and told them about what we had found, there were 3,500 bone fragments; 1,200 dental pieces, around 20 surgical screws, and about 10 dental braces found there. That is the sort of evidence composite that we obtained from our research. (Fernando Ocegueda September 3rd 2014, Focus Group)¹

¹ Fernando Ocegueda Flores is the father of Fernando, a 23-year-old industrial engineering student who disappeared in 2007.

The main focus of my research is the experience of relatives of disappeared persons in Mexico and their engagement with forensic science in order to search for their loved ones. Through a one-year ethnography conducted with relatives searching for their disappeared family members, this thesis advances a feminist forensics that *not only* takes into account attacks inflicted on women, or the lack of female contributions to scientific production (Rosenblatt 2015; Suchman, 2008), but also looks at Mexico's disappeared, and the contribution their relatives are making to forensic knowledge. My approach to feminist forensics delves into the embodied and subjugated practices of citizen forensic science: a grassroots knowledge-making process permeated by loss, care and love. This is a feminist forensics emerging particularly in Mexico, where 27,000 people have disappeared and more than 150,000 have been killed during the so called 'War on Drugs' that started in December 2006, and still continues to intensify today.

In this thesis I show how the lived experience of the relatives of the disappeared, their engagement with science, and political action, runs contrary to the predominant understanding of governmentality as a technique of government in "advanced liberal societies" (Foucault 1979, 1988, 2008; Rose, 1996, 1999); in which the state and its experts are shaping and promoting the self-regulated and prudential subjectivities constitutive of governmentality. To be clear, in my research I do not abide by the humanist distinction between words and deeds, objects and its representation². Following on Annemarie Mol, my research makes emphasis in practices —performing, doing, and enacting — which conceives reality as multiple. Every practice gives a different version

² Humanist distinctions see oral testimony and narrative as representations of past events or objects. Instead, for a feminist forensics, oral testimonies constitute one of the multiple interconnected versions of the real. In the Mexican case this is especially important since the forum extends beyond the court and trials. Historically, the participation of victims has generally been prescribed to the provision of oral testimony and witness statements in trials. In this thesis, I am exploring the role of victims as generators of authoritative knowledge beyond the cultural scripts of the courtroom. Moreover, since the forensic turn, emphasis has been made on the 'thing' as evidence, and the publics that gathers around it (Weizman 2012). For an excellent discussion of the distinction between an object and a thing, see Amoore 2013 (chapter on Aesthetics).

of the object (Mol, 1999, 2014). Hence, it is not a single object, but is more than one: “An object multiple” (Mol 2014, unpaginated). If we consider reality as multiple, emphasis is placed on how reality is “done and enacted rather than observed” (Mol, 1999, p. 77). Therefore, I analyse citizen practices of search as “technologies of the self” to make emphasis in the skills, knowledge and transformations that family members have had to endure in order to locate their loved ones. This allows me to explore the embodied consequences of producing forensic knowledge. For those searching for the disappeared, gathering knowledge is crafting a new version of themselves.

Acknowledging and responding to missing persons reports is usually the responsibility of the state. Most of the existing literature concerned with missing persons assumes the existence of a robust and competent governmental apparatus that searches for, locates and, if needed, forensically identifies missing persons (Parr *et al.*, 2013; Parr and Fyfe, 2012; ACPO, 2010; Wagner, 2008; Edkins, 2001, 2013; Smith, 2016). The “methodology of terror” described by Don Fernando Ocegueda, a father looking for his son who was abducted from his own house, shows a rather different narrative.³ At the time, very few newspapers reported that it was Don Fernando, rather than governmental authorities, who found this so called ‘kitchen’ in which hundreds of bodies were dissolved in acid in order to erase any trace of their existence. Even fewer newspapers or agencies noticed that Don Fernando’s story was being replicated in different parts of the country.

In some cases, it is necessary to deploy non-state actors, such as international organisations and independent forensic experts in order to find and identify missing persons (Rosenblatt, 2015; Parr and Fyfe, 2012; Wagner, 2008; Stevenson *et al.*, 2013). This is particularly necessary in collective missing events, such as mass fatality incidents, terrorist attacks, natural disasters or political crises. In such cases, agencies such as

³ The word “Don” is a prefix used in Spanish to denote respect to a male forename. That was the way I have always addressed Don Fernando during our multiple conversations.

Interpol (in the case of Disaster Victim Identification operations), the International Commission for Missing Persons, ICMP (for intra-ethnic conflict and war) and the work of the International Committee of the Red Cross, ICRC, have been crucial in facilitating state responses to missing persons situations. However, the work that the families of the disappeared perform in the construction and collection of forensic knowledge and evidence is invisibilised, or is treated as a contextual or therapeutic afterthought.

It has been argued that contemporary forms of politics constantly objectify and instrumentalise the individual, thus rendering them “missing from politics” (Edkins, 2011). Jenny Edkins’ notion of being “missing from politics” denotes a subject who is not visible on the threshold of recognized political subjects. As an example, Edkins analyses the experiences of the relatives of missing persons after the terrorist attack in New York on September 11, 2001, and the July 7 bombings in London in 2005, concluding that the institutions responsible for identifying victims and dealing with general public concerns failed to adequately engage with the relatives of the missing in ways that dignified and recognized their humanity (Edkins, 2001, 2011). According to this account, to be missing in contemporary politics is to be reduced to nothing but our own ordinariness: to be subsumed by number and bureaucratic practices or to be denied our uniqueness and irreplaceability (Edkins, 2011; Parr and Fyfe, 2012). However, throughout this thesis I will argue that there is a different way to understand the search, location and forensic identification of absent persons other than thinking of them as the “re-imposition of a police order of categorization without remnant” (Edkins, 2011, p. 196). Those “heartless and impersonal technologies” (Edkins 2011, p. 7) that are supposedly shaping the person as an object of governance are the very same technologies that can render the particularities of an absent person visible, and open up spaces to examine the politics of missing persons and forensic knowledge from a new perspective. Thus, it is not sufficient to seek to “politicise” a rational or apolitical technology, but,

instead, it is necessary to identify and pursue the political possibilities that reside within technologies themselves. For the purposes of this thesis, this implies analysing the emerging associations between forensic technologies and the families of disappeared persons in Mexico as sites of politics and contestation.

Research Questions and Objectives

The guiding research questions that underpin this project are:

- What does it mean to be disappeared in the context of contemporary Mexico?
- What kind of forensic knowledges do the relatives of disappeared persons produce?
- In what ways do these practices challenge “formal” forensic knowledge and expertise?

In order to understand disappearances in Mexico, this research project looks closely into families’ relations with forensic technologies and the practices of search that they have developed in order to find their loved ones. The politics of forensic expertise is a thread that runs throughout this thesis, and it connects the diverse ways in which disappearance, materiality and subjectivities reconstitute each other to bring forth what I identify as forensic citizens. Western historical narratives of what constitutes a citizen or what is citizenship have long been linked to the Greek idea of property, masculinity, warriorship and the *polis* as the site of politics. Following an analysis of the idea of citizenship as a set of rights and duties related to the state, citizenship rights became significant as an aspect of modern politics after revolutionary events such as the English Civil War, The American War of Independence and the French Revolution appropriated the political norms of ancient Greece as their own. (Isin and Turner, 2007, p. 6) For instance, Thomas

Marshall notion of citizenship composed by civil rights, political rights and social rights opened up spaces for the British working class to be protected from unemployment, sickness and accidents (Isin and Turner, 2007). However, what constitutes citizenship in the twenty century has to do more with the separation of subjects from citizens; with the struggles for recognition by those individuals who have long been dismissed by the classic/Greek notion of citizen(ship).

Citizenship as a multifaceted and dynamic institution (Isin, 2009; Staeheli, 2010), involves more than membership of a political community or a “status held by [certain] individuals that empowers them to claim rights” (Staeheli, 2010, p. 399). For Engin Isin citizenship is a way of being political (Isin 2002a). By shifting the emphasis from individual subjects to the acts that produces such subjects, Isin analyses “Acts of citizenship”(2008) as those acts that transform established practices, status and order; disrupt habitus and create new possibilities (Isin and Nielsen, 2008, p. 10). For the purposes of this thesis, practices of search and location of disappeared persons, act as disruptive practices of subjectification that constitute new political subjects (Squire 2016 in Darling, 2017, p. 730). In contrast to common understandings of citizens who “act out already written scripts” such as voting, paying their taxes and contributing to their immediate communities, these forensic citizens, similar to Isin’s activist citizens, engage in “writing scripts and creating the scene” from which they will be performing their citizenship (Isin, 2009, p. 381). Families in Mexico are the ones using technologies – lists, DNA, ante mortem questionnaires, etc. to locate and identify their loved ones.

Through the analysis of their journeys of transformation, I explain how families of disappeared persons in Mexico, transform themselves from *maquila* workers, teachers, into forensic citizens. They are claimants of rights not only for themselves, but also, for their disappeared family members. These forensic citizens are the embodiment of a new

way to understand the “rights, scales and practices” (Isin, 2009, p. 368), through with subjects enact themselves, and others, as citizens.

Through emphasising the scales and practices of forensic knowledge production and the transformation of individuals into forensic citizens, I discuss the different ways in forensic knowledge is disputed and endorsed in the public sphere, and how it creates spaces of political engagement. Thus, I analyse two specific aspects of forensic knowledge: the body of knowledge emerging from Mexican forensic institutions, and the citizen forensic knowledge that derives from the engagement of families and communities in the search for disappeared persons.

Missing Persons and Disappearances: From Being Missing, to Being Disappeared — Why Does the Difference Matter?

In the U.K., the human geographer Hester Parr’s project, *Geographies of Missing People: Processes, Experiences, Responses*, analyses the experiences of adult persons reported as missing, with close attention to their “missing journey”. This involves an analysis of the places that missing people visit, the things that they do and how the environment is used as a resource to remain non-visible/absent during their ‘missing journey’.⁴ This study also investigates the strategies used by the police to find missing persons, and the ways in which “geography” is perceived during the search (Parr *et al.*, 2013; Fyfe *et al.*, 2015). Additionally, the role of family members is explored through the understanding of the “search practices that families engage in [and that draw upon both] their own personal

⁴ According to Stevenson *et al.*, (2013, p. 11) all the interviewees were over 18 years old, with over 90% of the cases analysed aged between 22 and 59 years old; ‘Missing journeys’ is a term that the project team employs as a way to give coherence to absent mobilities. They “rationalised” episodes of being absent into chronological journey ‘stages’ such as leaving, moving, encountering and returning. (Parr *et al.* 2015, see footnote number 5).

geographies and that of their missing member” (Parr and Stevenson, 2013, p.55; see also Fyfe, *et al.* 2015).

In this sense, the term “missing” is attributed and relational (Parr and Fyfe, 2012; Parr *et al.*, 2013). To be “missing” is a relational term, since the absence of a person is experienced primarily within her/his close family network, and in relation to the spaces where s/he was expected to be. It is “attributed” in the sense that a third party is needed to label a person as “missing”. According to Biehal and Wade (2000) those “left behind”, (e.g. society, family members, friends or work colleagues) are the ones who assign someone the status of “missing”. However, the concept of being “missing” has a profound effect on how the person is positioned in relation to power. As Biehal and Wade (2000) argue, the “power of the definition in the hands of those left behind may render the adult missing person labelled as a ‘victim’ seem to possess little autonomy or ability to make an active ‘choice’” (Biehal and Wade, 2000 in Parr *et al.*, 2013, p. 24). Moreover, even in cases where someone is reported or noticed as missing, s/he might not “experience their own missingness or absence” (Parr and Stevenson, 2013, p. 24). This is particularly relevant for instances in which an individual goes missing voluntarily: individuals who have decided to absent themselves, claiming their right to disappear and start a new life (Parr *et al.*, 2013).

Academic literature regarding circumstances in which individuals go missing involuntarily, under suspicious circumstances, as an effect of war, violence or natural disasters, demonstrates that those with the power of placing the definition of “missing” are not only family members or immediate social networks but other actors such as international agencies (e.g. International Committee on the Red Cross, ICRC; or the International Commission on Missing Persons, ICMP), or government authorities (e.g. military forces in Argentina). (Wagner, 2008; Edkins, 2011; Taylor, 1997; Rosenblatt, 2015). All of these actors play crucial roles in cases where individuals are absent from

their daily lives and may — or may not be — present in time and space. There are different spaces and circumstances from which people become absent. For instance, the strategy of “disappearing” people is a technology of terror that has been widely used by repressive governments. Tracing back this practice, Nazi Germany becomes the archetypal example, given the Nazis’ awareness that prohibiting burials and prohibiting information on the whereabouts of a detainee would leave relatives and acquaintances in a state of uncertainty that contributed toward terrorizing whole populations.⁵ This strategy of concealing the whereabouts of a person has also been used in Guatemala, Brazil, Chile, Uruguay and was “perfected” by the Argentine military during the period known as the “Dirty War” between 1976 and 1983.⁶

During Argentina’s “Dirty War” people disappeared, in most cases without leaving behind even “such ordinary traces of former existence as a body and a grave” (Arendt, 1966, p. 434 in Dieterich, 1986, p. 48). In addition, when bodies did find their way into pre-established bureaucratic and forensic mechanisms (i.e. in medical examiners’ rooms, morgues or cemeteries) they bore signs of torture. According to Diana Taylor (1997) it was through inscribing the marks of torture on dissident bodies and “disappearing” individuals that military officials worked together to control the “Argentinian political body” — Argentina’s Catholic principles via the performance of a preordained and fixed national identity, traditions, and goals (1997, p. ix).⁷

⁵ “Corollary documents to Hitler’s Night and Fog Decree” (Nacht und Nebel Erlass, December 7, 1941 in Dieterich, 1986, p. 48). According to these documents, relatives and acquaintances were not notified of the fate and place of decease/burial of the detainees.

⁶ In 2009, Argentina’s Supreme Court ruled that the dictatorship’s killings between 1976 and 1983 constituted “crimes against humanity within the framework of [a] genocide” (Goñi, 2016).

⁷ The Argentine military received training on how to deal with the wave of international communism that was threatening Catholic Argentina through “external agents and their local allies, who formed a complex grouping called ‘the subversion’” Ranalletti (2014, p. 149) Following this, Ranalletti describes how, for the Argentine military, “a questioning of established authority, sympathy for egalitarian projects, labour-union demands, and student agitation were all considered to be of the same nature as a terrorist attack on the state” (2014, p. 151).

The use of the verb “to disappear”, in Spanish, *desaparecer*, was used to name having been forcibly taken away from your customary social networks, in most of cases by the military or other state actors (Wright, 2016).⁸ The *disappeared* is a neologism that describes the condition of being absent, of being forcibly taken away. The term was first used in relation to people by General Jorge Rafael Videla, president of Argentina, during a press conference held in 1979 where he declared, “the disappeared as such is an unknown [...] he has no entity. He is not here, neither dead nor alive: he is disappeared” (Pigna, 2008).⁹ This particular technique of government works through “the state’s ability to deny responsibility for these crimes, while simultaneously making the entire society aware that it [can] kill with impunity” (Ross, 2008, p. 41). Disappearances generally occur within the context of dictatorships and military political regimes, and, more recently, during internal conflicts “particularly when trying to repress political opponents” (Amnesty International, 2017). For instance in Mexico, “to disappear” might not only be the consequence of an absence “arranged” by the state but is also likely to be part of a deliberate action from private entities (i.e. organised crime groups). As explained by Rainer Huhle, member of the United Nations Committee against Forced Disappearances, a nationwide phenomenon, termed “the privatization of disappearances”, has emerged where:

[...] groups that are not the State have copied the technique and made it their own. There are many cases where neither the families of the

⁸ In the specific case when the participation of state actors has been proved, the legal term used for this crime is “enforced disappearance”. According to the United Nations’ *International Convention for the Protection of all Persons from Enforced Disappearances*, an enforced disappearance is defined by three cumulative elements: (1) Deprivation of liberty against the will of the person; (2) Involvement of government officials, at least by acquiescence; (3) Refusal to acknowledge the deprivation of liberty or concealment of the fate or whereabouts of the disappeared person (United Nations, 2017).

⁹ In 1979, after an official visit from the Inter-American Commission on Human Rights (IACHR) to Argentina, the military leader Jorge Rafael Videla, held a press conference where, in relation to “the disappeared” he declared: “[...]Frente al desaparecido en tanto esté como tal, es una incógnita. Si el hombre apareciera tendría un tratamiento X y si la aparición se convirtiera en certeza de su fallecimiento, tiene un tratamiento Z. Pero mientras sea desaparecido no puede tener ningún tratamiento especial, es una incógnita, es un desaparecido, no tiene entidad, no está... ni muerto ni vivo, está desaparecido”. Press Conference available in Spanish at: <https://www.youtube.com/watch?v=7PCzaoEPv10> (Accessed: January 2017).

victims nor authorities have a clear idea of the reason for the disappearance [...] In a place like Mexico, where it is easy to disappear people [and] with such impunity, the reasons multiply. And when the lack of [police] investigation is so significant, anything can happen. However, regardless of who is responsible, the State has a clear obligation to investigate and punish the crime (Martinez, 2013).

For Melissa Wright (2016) the term *disappeared* represents an “innovative activist technology” that emerged in the 1970s under repressive governments in Latin America, that constantly “denied their role in ‘disappearing’ people, whom, they argued did not exist in the first place” (Wright, 2016, p. 3). In Argentina, relatives of the disappeared launched a challenge to the governing premise of disappearance and demanded justice on behalf of their disappeared family members (Wright, 2016; Moon, 2013; Taylor, 1997; Edkins, 2011). The Mothers of Plaza de Mayo, ‘*Madres de Plaza de Mayo*’ is one of the most influential human rights’ organizations in Latin America. Forty years after their establishment on 30 April 1977, the Mothers continue to demand the location of their “disappeared” alive.¹⁰ As a strategy for making their disappeared loved ones visible and accounted for in public life, the Mothers protested on the streets of Argentina holding photos of their disappeared sons and daughters. Along with the young faces portrayed in those photographs, the Mothers wore white cloths wrapped around their heads, embroidered with the name of their disappeared. The use of the white cloth (to symbolise a baby’s diaper), along with the photographs, were meant to represent the disappeared as “youths”, individuals who “were snatched from the lives that they were just beginning to live” (Wright, 2016, p. 6). The case of Argentina’s disappeared is discussed in order to provide useful context throughout this thesis, since the work of human rights’ organisations such as the Mothers of Plaza de Mayo and the Grandmothers of the Plaza

¹⁰ According to the Mothers of Plaza de Mayo, if the military took their children alive, they should be brought back alive. To admit and acknowledge their children’s death excuses those responsible from the crimes committed. Thus, they use the slogan ‘Bring them Back Alive’ (‘*Aparicion con vida*’) to represent their organization.

de Mayo (*Abuelas of Plaza de Mayo*) has been instrumental in understanding family responses to disappearances as well as for the development of forensic science in Latin America.

As Keenan and Weizman (2012) argue, the agency of the missing person and the practice of forensics — in its successes and its limitations — are thus intimately connected (pp. 64-65). The existence of robust forensic practices for the search, location and identification of disappeared persons play an important role for the political, social and familial reconstitution in post-dictatorship countries (Smith and Wagner, 2007; Wagner, 2008). In these contexts, the development of DNA forensic identification technologies is “seen as a fundamental tool in the identification process of unnamed bodies of victims and as a core site of identity formation for both individuals and families affected by the terror of the dictatorship” (Smith and Wagner, 2007, p. 35). Using the genocide that took place in Bosnia in 1995 as an example, Wagner (2008) explains how the identity of the missing person changes during the forensic identification process. On one side there is the knowledge of technicians in a laboratory conducting tests and labelling bones, and on the other there is the intimate knowledge that families hold of their loved ones. These two parallel knowledges eventually converge and become related to each other when, in the Bosnian case, the International Commission on Missing Persons (ICMP) finds a “match” and thus assigns a probable identity to a set of human remains. As Wagner argues:

Certainly, the DNA-based technology of extracting and analysing genetic profiles has become the primary and most effective means for resolving the dilemma of absence — the ambiguous status of a missing person — by reattaching personal identity to physical remains. The success of this technology, however, relies on other critical sources of knowledge, including family members’ recollections of the missing persons [...] Memory, imagination, and supposition, therefore, do not exist on the opposite side of some vertical line drawn between their subjectivity and the objectivity of DNA science. Rather, these different kinds of knowledge gain significance within the process of identification in relation to one another (Wagner, 2008, p. 150).

In this sense, families' accounts of the missing, such as their recollections of the last moments they spent with their missing loved ones, as well as their "imagination" (Wagner, 2008) of what might have happened to them, are seen as sites of knowledge production. These families relied on "networks of associations" in order to secure their memories. Later, as the missing person case unfolded, technological devices — most notably DNA analysis and forensic reports — were included as part of these networks of association, in order to identify unnamed bodies and to provide knowledge of the fate of those who were missing.

A discussion around missing geographies entails an understanding of the associations between human and non-human, forensic technologies and forums where those left behind interact and render the disappeared visible again. "Missing, being missed and missingness" have different meanings depending on their context, and, thus, the search for those who are absent brings forth diverse political consequences (Parr and Fyfe, 2012, p. 617). For instance, in Mexico, citizen practices of search and location of disappeared persons are challenging the ways in which forensic science is produced and understood. Violence in the country has affected not only marginalised communities but also business men, politicians and other "elite" members of society.¹¹ Even in these "high-profile" cases, authorities have not been able to effectively search for and locate the absent victims. According to international and national human rights organisations, there has been a marked increase in human rights abuses perpetrated by security forces, kidnappings, killings and disappearances since 2006 (Open Society, 2016). Furthermore, there is "very little accountability for killings, and almost none at all for disappearances and torture" (Open Society, 2016, p. 35). After the disappearance of a family member,

¹¹ For instance, in September 2007, Silvia Vargas Escalera, the eighteen-year old daughter of former CONADE representative and businessman, was kidnapped and killed; in 2008, 14 year-old Fernando Marti, son of one of Mexico's most successful businessmen was kidnapped and his body was found two months later inside a car. Mexican authorities were not involved in any of these cases, due to the involvement of some police officers in the kidnapping trade.

families in Mexico have been immersing themselves in journeys of search for their loved ones. Families have to learn how to navigate the complexities of an ever changing state assemblage that gives little attention to the cases of disappeared persons and that has no interest in investigating these crimes.

In this thesis, I investigate the phenomenology of families' search practices and their relation to forensic materialities. These relations are, in many cases, instigated through the technologies they use such as victims' records, GPS, data tracking, and, in some instances, clandestine mass grave location. This analysis of how relatives of the disappeared engage with forensic materialities creates a variety of possibilities for understanding citizen-led search strategies and the political possibilities that citizen forensic knowledges could bring to a scenario, as in Mexico, that is plagued by uncertainty, lack of rule of law and corruption.¹² My analysis will be grounded in the practices of citizen forensic science. It will explore (im)material, non-human/ human, performative and spatial forms of self-shaping subjectivities that take place in various spaces and through diverse practices: the continuous visits to the mortuary, the analysis of the soil they walk through, protesting in the streets, pressuring governmental officers to do their work, and, often, just asking to be with them while they search for their disappeared. In this thesis I dwell on these citizen-led practices, always complex and contradictory in the interactions that they have with forensic materialities, but, above all, with their absent loved ones. These forensic citizens are opening up forums for thousands of disappeared persons in Mexico to be visible, acknowledged and accounted for.

¹² Following Dieterichs (1986) explanation of what corruption means in contemporary Latin American societies, the concept of corruption in this thesis refers to "an exchange and transfer system of wealth and power between, in general terms, society and polity, and *in concreto*, between the dominant — and to a lesser extent middle — classes and the state" (Dieterich 1986, p. 42). In practice, this means that systems of corruption "function parallel to the formal or constitutional/legal one." (Dieterich, 1986, p. 43).

Thesis Structure

Throughout the thesis I have written ‘Interludes’ these are included to intentionally break the readers flow. These interludes are narrative accounts taken from my fieldwork diaries or reflective writing that I produced while engaging iteratively with my data during the writing up process of this thesis. These interludes are thus, a way “to *talk about* complexity, to *appreciate* complexity, and to *practice* complexity” (Law, 1999, p. 10, emphasis in original). Thus, these interludes work to convey the complexity and uncertainty that I encountered during my fieldwork.

The remainder of this thesis proceeds as follows: Chapter Two “On Forensics” explains the main analytical frameworks of this study. In order to set out the parameters of discussion in the following chapters, I explore the contributions made by Science and Technology Studies (STS) literature to social studies of forensic science. In this second chapter I analyse the concept of ‘forensics’ in a threefold manner: first, I examine how the use of the science is understood to be in the service of the law, second, how it has been used as a tool to identify victims of human rights abuses, and, finally, I explore the political possibilities within *feminist forensics* understood as a practice of forensic science that pays attention to the situatedness of forensic knowledge to enable different understandings of justice and truth that are not necessarily linked to courtroom proceedings.

Chapter Three, “On Methodology”, delineates the methods I used during my fieldwork, describes the families I met in Mexico, my field sites, and how I followed ‘the disappeared’ through different state institutions. Finally, I reflect on the complexities of conducting research of this nature, and I describe some of the forensic materialities I encountered (lab coats, human remains, maps, notebooks and personal archives).

In Chapter Four, “On Mexico”, I explain how forensic science has developed in Mexico from the disappearances of young girls in the 1990s, to the disappearances that have occurred during the so called ‘War on Drugs’. Further, I show how forensic science and expert knowledge is crafted in a community where less visible actors, such as family members, take part alongside “experts”. Finally, I contend that, since its beginnings, the families of disappeared persons have been crucial to the production of forensic science in Mexico.

In Chapter Five, “On Alejandro”, I show the knowledge(s) that emerge from the dialectic movement between Alejandro’s family and the material/digital traces that they have encountered while searching for him. I analyse emergent performances of absence in order to show how absence is multiple. I argue that these performances of absence emerge at different points in time, but none of them vanish; they coexist in the present. These knowledges of absence have emerged in practice and challenge the notion that categories have to be stable and bounded to be effective means of knowing the world.

In Chapter Six, “On Becoming” I explain how by analysing families’ practices of search, we can shed light onto other knowledge-performances that they have developed. I use the term ‘journeys’ not only because their search entail a lot of physical movement (within the country, their cities, and between governmental offices) but in acknowledgment of the ways in which journeys can be processes of becoming a new person — as the families’ describe it. These becomings begin after families have faced the dereliction of duty of state authorities. Further, I want to argue that this process of becoming can be framed in terms of “technologies of the self” as a theoretical framework, that discusses governmentality from a criminological perspective (Foucault, 1988).

In Chapter Seven, “On Authority, Boundaries and Expertise”, I explore the boundaries that emerge when families’ practices of search challenge the pre-established role assigned

to family members during investigations. These boundaries shed light onto the struggle to determine who and what is allowed to speak in the public forum, collect and manage forensic data and create narratives about what happens to the disappeared in Mexico. This chapter argues for a feminist practice of forensics. This feminist forensics emphasises the notion of forensis as forum, as the practice of opening up of spaces for different understandings of justice and truth that are not necessarily linked to courtroom proceedings.

Chapter Two: On *Forensis* and STS

In this chapter, I analyse the term forensics in two ways. First, I will discuss this term as it is broadly construed, as the “study and practice of the application of science to the purpose of the law” (Forensic Sciences Foundation, 2017). Second, I will consider the etymology of the term forensics which derives from the Latin *forensis*, meaning “in open court” or public forum. The etymology of the term has its roots in the marketplace, areas within ancient Rome where business, public affairs and debates were conducted. The Roman Forum was a multidimensional space encompassing politics, law, and economics. It provided a controlled arena in which claims and counterclaims could be presented and contested; the forum involved the “translation, mediation or interpretation between the ‘language of things’ and that of people” (Keenan and Weizman, 2012, p. 28; see also Weizman, 2014; Lawless, 2016). In this sense, the Latin *forensis* encompasses a relation between objects, mediators and forums.

Considering the etymology of the term forensics, allows the political possibilities that forensic technologies enact during the processes of identifying the victims of human right violations to be emphasised. Forensics, then, becomes not only a site for the contestation of claims, but a forum in which to render visible atrocities committed by repressive political regimes. As Moon (2013, p. 8) argues, forensics not only conjoins field and forum, but also speech and materiality through the construction of “evidence”. In this sense, forensic knowledge not only contributes to the practices upon which the criminal justice system operates, but it can make powerful political claims. Contestation over forensic knowledge and the struggles advanced by stakeholders (such as victims of crime) for greater forensic insight in public spaces, is precisely a political stance over what can and cannot appear or be discussed in the forum. In short, forensic science and the

production of forensic knowledge is a political, social and scientific practice. In order to explore these ideas, I will briefly review how Science and Technology Studies (STS) has crafted an approach to science-as-practice, which serves as a springboard to understand the processes by which object and subjects emerge, and how knowledge making practices with humble origins are transformed into strong public evidence (Jasanoff, 2012).

Finally, I will argue that while forensics can be understood as a type of archaeology, by tracing the steps that an authority takes to annihilate a population (as in the cases of the thousands of disappeared persons in Argentina, or the genocide in Bosnia), forensics can also be thought of as a political practice of possibilities that engages not only with the past, but projects into the future (Amoore, 2015; Keenan and Weizman, 2012).

On Science and Knowledge

Science Studies has long been concerned with the study of the scientific process, scientific knowledge and technology. Philosophical approaches to the study of science have included, among others, Logical Positivism, usually linked to the Vienna Circle, and Karl Popper's Falsificationism.¹³ For both approaches, scientific knowledge is produced by the formal relations between theories and data, whether by developing a thorough method that transforms individual observations into general statements, as in Logical Positivism, or by a process of conjecture and refutation that allows for increasing numbers of facts to be encompassed to develop a demarcation criteria between science and non-science, as in Popper's Falsificationism theory (Sismondo, 2004, pp. 1-5).

There are also structural-functionalist views of science that argue that scientific study, like other social structures, serve the social function of extending certified knowledge.

¹³ The Vienna Circle was a coterie of philosophers and scientists based in Vienna in the 1920s. This group was very active in advertising the new philosophical ideas of Logical Positivism, and wanted to develop a philosophical understanding of science that would allow for an expansion of the scientific world view into the social sciences and philosophy (Murzi, no date; Sismondo, 2004, pp. 2-4).

According to Robert Merton (1942) science, as a social institution, achieves its goals by following an “ethos”: a complex set of “values and norms which is held to be binding on the man of science” (Merton, 1942 [1973], p. 269). The values and norms that comprise this ethos are universalism, communism, disinterestedness, and organized scepticism (Merton, 1942 [1973]). Merton’s approach to science describes a social structure that privileges epistemic concerns. Science and scientific practice are perceived as a more or less coherent activity made up of actors that adhere to these established norms.

These approaches are part of the representational idiom that takes for granted that “the defining characteristic of science is its production of representations of nature, facts and theories” (Pickering, 1994, p. 413). Representationalism separates the world into the ontologically distinct domains of words and things. In this sense, scientific representations of nature either match the reality “out there” or not, thus, different representations of nature cannot all be right. This leaves the dilemma of the relationships between objects and their representations open for dispute, and lead us to ask whether knowledge of this kind is actually achievable (Barad, 2003, p. 811; see also Pickering, 1994, 2016).

Structural-functionalist approaches to science share the common idea that norms and the establishment of specific standards are necessary for scientific progress and success. However, critics of this approach show how, in practice, the scientific ethos is made up of norms and counter-norms that continuously co-exist in scientific spheres, thus, a normative analytical framework that dictates how science and scientists work does not hold together. Therefore, norms need to be considered not as static binding categories, but as rhetorical resources. The shift from structure-centred approaches to more actor-centred approaches is one response to the traditional sociology of science, which denies material agency in its understanding of science.

In the late 1970s, historians, sociologists and philosophers of science set out to understand the content of scientific knowledge in sociological terms (Sismondo, 2004, p. 42). One group of sociologists of scientific knowledge (SSK) based at Edinburgh University's Science Studies Unit developed the "strong programme in the sociology of knowledge". (Barnes, 1996; Bloor, 1981, 1983, 1991 [1976]; Barnes and Bloor 1982; Shapin, 1975; Pickering, 1992). SSK considers science as a social product: it is concerned with the beliefs, reasons or causes that underpin scientific practices and knowledge. As Bloor (1981) puts it:

There is nothing special about science that resides in the biology of scientists, their sensory and memory capacities, or motor dexterity. There is nothing special about the size of their incomes or the structure of their professional organizations. There is not even anything special about their using pieces of apparatus or their taking measurements and samples. It is their goals and the interpretations they put on their interactions with the world that matter. We only begin to bring science as such into focus when we notice, say, certain features of its training procedure, where esoteric traditions, practices and precedents are passed on to new members. In short, it is only by examining the culture of science that we come close to the heart of that activity. To study the transmission, distribution, maintenance and change of the accepted beliefs and practices in science, is therefore to study one of its most vital aspects. (Bloor, 1981, pp. 199-200.)

The SSK approach emphasises the instrumental aspect of scientific knowledge and the agency of scientists as their main actors; knowledge is for use, not for contemplation and, thus, scientists will use instruments to pursue their own interests (Pickering, 1992). In this sense, scientific knowledge is seen as relative to a particular culture with corresponding specific underlying concepts of interest. This approach offers an analysis of scientific knowledge that draws upon sociological resources by extending this conceptual net to fit new circumstances (Pickering, 1992). The "strong programme" has been criticised for its over-reliance on the social world and its understanding of scientific culture as a single unitary entity. This view has been deemed to adopt a foundationalist attitude towards the

social world in order to replace the foundationalist view of the material world that it rejects (Sismondo, 2004, p. 49; Pickering, 1992).

For Collins and Yearley (1992, 1992a) traditional SSK prioritises the human subject through its assumption of an asymmetric distribution of agency. Human beings are seen to possess all the agency; the material world possesses none. Thus, SSK takes for granted that the ultimate aim of science is to produce representations of the world that can only be achieved through the eyes of the scientists and their interests and norms. The “strong programme” has been supplemented by further approaches to the study of science and technology. This view has provided the philosophical underpinning for Science and Technology Studies (STS) by opening up the possibility of studying the content of science and technology as a social and active, open ended process. According to Michel Callon (1987, p. 95) in order to follow technology in practice, social studies of science need to recognise that their object of study is neither society nor the social relationships that emerge within it, but the actor networks that simultaneously give life to society and technology. For instance, studies on ethnomethodology challenge the idea of fixed, pre-established social categories and, instead, focus on how “actors construct intersubjective understandings of epistemological phenomena in localized settings” in order to organise their everyday activities (Lawless, 2016, p. 97). Ethnomethodology has also been influential in the social study of forensic science through its analysis of the social construction of meanings, such as “common sense”, “evidence” and “facts”. If scientific knowledge and objects are socially constructed, then the objects that scientists use in their laboratory experiments, and which are later transported to court rooms, are not “natural” objects, but objects constructed for the purpose of the study: artefacts.

Research on STS has emphasised the role of agency through its attribution not only to humans but to non-humans and objects. For instance, Actor-Network Theory (ANT) rejects pre-established social categories and argues for a symmetric approach to agency

whereby “entities take their form and acquire their attributes as a result of their relations with other entities” (Law, 1999, p. 3). By using semiotics to think symmetrically about human and nonhuman agency, ANT considers that objects are defined by the relations they establish within the networks in which they are placed. This relational materiality sees science and technology as intimately connected and thus should be understood as “technoscience” (Latour 1987).

Bruno Latour (1987) argues that scientific knowledge produces “immutable mobiles”: well defined, bounded objects that can travel through different spaces and, thus, are displaced through transformation. For example, forensic evidence that travels in the form of DNA swabs from crime scene transforms into numbers and percentages (electropherograms) in laboratories and, finally, is discussed in courts during criminal trials. In this sense, ANT moves away from the representational idiom of science and into the performative idiom, whereby “science can also be seen as a realm of instruments, devices, machines, and substances that *act, perform, and do things* in the material world” (Pickering, 1993, p. 563, my emphasis). As Mol (2014) argues, for the performative idiom, there are not just many ways of knowing “an object” but rather many ways of practising it.

The concept of performativity has attracted philosophical as well as sociological attention (Pickering, 1992, 1995; Butler, 1990). For performativity the world is full of agency and science is understood as practice. Thus, knowledge is temporally emergent in practice (Pickering, 1994). As Pickering (1992, p. 14) argues:

[T]he different dimensions of scientific culture are produced, change, and evolve together in scientific practice [...] and move beyond the acknowledgment or thematization of “the social” as a central organising and exploratory concept (Pickering, 1992, p. 14).

This view of the world seeks to escape from divisions between nature/culture, object/subject, human/non-human, mind/body, etc. The politics of dissolving these boundaries sees the object of knowledge as an actor or agent and “never as a slave to the master that closes off the dialectic in his unique agency and his authorship of ‘objective’ knowledge” (Haraway, 1988, p. 592). This approach acknowledges the contingent nature of science and allows for it to be contestable and contested. Annemarie Mol (2002) argues that objects as being enacted, and thus reality multiplies. Similarly, Karen Barad (2003) asserts that we know things because we are the world in its differential becoming and, thus, it is necessary to talk about “onto-epistem-ology” as the “study of practices of knowing in being [...] as a way to think about the kind of understandings that are needed to come to terms with how specific interactions matter” (Barad, 2003, p. 829).

An acknowledgement of the performativity and agency of the material world opens up possibilities for knowledge production. It allows, for instance, for human and material agency to be mutually productive and to emerge temporally in practice (Pickering, 1993). In this sense, practices of knowing and being are not independent of one another, but are mutually implicated. Therefore, in order to discuss how scientific knowledge is produced, enacted, performed, we have to analyse the practices that human and non-human actors perform and their emerging properties. Examples of the performativity of scientific practice can be seen in: Annemarie Mol’s (2002) analysis of how atherosclerosis is made in a Dutch university hospital; Marianne de Laet and Annemarie Mol’s (2000) insight into how the fluid mechanics of the Zimbabwe bush pump allows this technology to travel to different spaces without losing its capacity to provide clear water to communities, and Andrew Pickering’s (1993; 1995) analysis of the creation of the bubble chamber in the 1950s — a time where the field of particle physics was struggling to accumulate data on a new set of particles discovered in cosmic-ray experiments using cloud chambers.

Pickering focuses his attention not only on the way in which knowledge for the creation of the bubble chamber emerged in practice, but also on the temporality of these processes. For Pickering, “any passage of practice cannot be foreseen or explained in advance; the future genuinely emerges in the real time of practice” (Pickering, 1994, p. 415). Thus, nothing necessarily endures, every single element of scientific culture — be it material, conceptual or social, is revisable in practice, and it evolves open-endedly into the future (Pickering, 1994, p. 415). This is why, instead of talking about the products of science as well-bound and stable objects, Pickering makes the case for “Islands of Stability”, which are socio-material configurations “where some sort of reliable regularity in our relations with nature is to be found” (Pickering, 2016, p. 9). As an example of this socio-material set up, he suggests thinking about power stations. Power stations provide energy (i.e. this is what we intend for them to do), but, at the same time, they have unintended effects, such as contributing to global warming through their generation of carbon dioxide and they are, of course, capable of failures or accidents with serious consequences.

In what follows, using Pickering’s account of the creation of the bubble chamber, I analyse the temporally emergent structure of scientific research and describe the “dances of agency” between scientists and objects, as well as the “tuning” that occurs within them as the development of knowledge unfolds.

‘Islands of Stability’, ‘Dances of Agency’ and The Mangle

In the 1950s the physicist Donal Glaser, based at the University of Michigan, embarked on the construction of a new particle detector: something similar to the cloud chamber but with a denser working substance that facilitated the identification of a new set of particles discovered in cosmic-ray experiments. He began to investigate a range of techniques,

using liquids and solids that could be suitable for registering particle tracks — like those produced in cloud chambers — but he failed in all of his attempts. Through these different attempts, Glaser changed from being a "microactor", a single human individual investigating particles, to a "macroactor", which involved a team of no less than nine people from different universities.

After a careful consideration of Glaser's failed attempts, Pickering describes how the bubble chamber and its powers, on the one hand, and Glaser, on the other, came into being together, and in relation to one another, through the different transformations they experienced while immersed in "dances of agency" (Pickering, 1992, 1993, 1995). The "dance of agency" is a dynamic process in which the limits of human and material agency cannot be known in advance but, rather, are performed while in practice. In this sense, Glaser's failed attempts to create the bubble chamber constitute *resistances* — the occurrence of a block on the path to a given goal. Resistances are liminal, they only exist on the boundaries at the point of intersections between human and non-human agencies. Glaser's responses to these resistances (the different ways in which he decided to use alternative substances to register the particles) are termed *accommodations* by Pickering (Pickering, 1993). The dialectic movement between accommodations and resistances, material and human agency, is known as "the mangle of practice" (1993, p. 569). According to the "mangle", material and human agency emerge and are "interactively restructured with respect to the other" (Pickering, 1993, p. 585). Thus, Glaser's different versions of the bubble chamber can be viewed as an indefinite multiplicity of performative entities that are endlessly becoming in decentred and emergent "dances of agency". Even if the bubble chamber was not the machine that Glaser intended to create, it is, still, a successful alternative machine that came into being as product of the emergent dances of agency. Donald Glaser succeeded: he won the Nobel Prize for building a "free-standing

machine” that could work independently of him. However, this standalone machine is not as strong and stable as it seems. These socio-material set-ups can be better understood as “islands of stability”. These “islands of stability” can be understood as the articulated scientific accounts that emerge from these “dances of agency”, and, as such, are products of the mangling process: knowledge is being produced as the “dances of agency” go along. Therefore, we need to engage in new mini-dances of agency to arrive at better, more convenient configurations. As Pickering puts it:

Arriving at an island of stability is not a once-and-for-all achievement guaranteed by knowledge. These islands remain fragile and uncertain performative accomplishments requiring continual repair and maintenance (Swanton 2013), mini-dances of agency. [...] *The flux of becoming never goes away, though we readily forget it.* (Pickering, 2016, p. 9, my emphasis.)

Embedded in this never ending “flux of becoming” are not only these “islands of stability” (i.e. “accomplishments” that change and transform into more convenient configurations over time), but also their human counterparts. We are continually transformed by “tuning” ourselves into the emergent agency of the world. These “islands” are the “decentred joint products of the human and nonhuman” (Pickering, 2016, p. 12). In short, approaches to science-as-practice provide an understanding of the world as emergent, where there are no boundaries between subject and object, and, therefore, agency is attributed to humans and non-humans. By acknowledging the agency of the world, the *telos* of science does not close off dialectic processes in order to achieve authorship of “objective” knowledge. Rather, the production of science and knowledge becomes a paradigmatic model that is yet contestable and contested. The flux of becoming never quite disappears, although we readily forget it.

Discussions around binary distinctions like sex/gender, or nature/culture have been the object of debate in STS in a number of different areas. Through the analytical movement

from the representational to the performative idiom, social studies of science and technology have made a strong argument towards all forms of knowledge claims, especially scientific ones.¹⁴ Moreover, STS research has shown that traditional ideologies about objectivity and scientific methods are particularly unreliable guides in attempting to understand how scientific knowledge is actually *made* (Haraway, 1988, p. 576, emphasis in the original). Thus, in the next section I discuss feminist approaches to STS to highlight the importance of the body and embodied practices of knowledge production.

Feminist approaches to STS: Embodied and Performative Understandings of Science

Traditional accounts of scientific objectivity argue for a “pure science” that is separated from emotions, feelings and subjective experiences. In contrast, feminist objectivity argues for a particular and specific embodiment of scientific knowledge that escapes from the false ideal of a complete vision from above, that promises the “transcendence of all limits and splitting of subject and object” (Haraway, 1988, p. 583). Donna Haraway’s work (1991, 1997, 1988) has been influential to the performative understanding of science. Haraway extends the notion of relational ontologies from language semiotics to material semiotics, where meanings and materiality co-emerge in socio-material practices. (M’Charek, 2013; Mol, 2010; Law, 2009).

Haraway argues for “situated knowledges” as a feminist response to scientific objectivity. “Situated knowledges” recognise partial perspectives and open space for contestation, this emphasises a view from a body: an “always complex, contradictory, structuring and structured body” (Haraway, 1988, p. 589). In short, Haraway is interested in the politics

¹⁴ For an ongoing discussion of studies of expertise and experience and the problem of extension see: Collins and Evans (2002), ‘The Third Wave of Science Studies: Studies of Expertise and Experience’, *Social Studies of Science*, 32 (2), pp. 235 – 296.

and epistemologies of location, positioning and situating. It is positioned rationality, meaning that partiality is the condition under which we make rational knowledge claims. (Haraway, 1988, pp. 589-590). Further, while opening spaces for positioned rationality, feminist objectivity joins the partial and silenced voices in the public forum where views are contested. The route to objectivity occurs through a collective social process, wherein the clashing and intermeshing of alternative theories provides a means for critically assessing one another's background beliefs and values (Tsou, J.Y., *et.al.*, 2015, p. 4). Science then, becomes not what is stable, unbiased and closed, but that which is continually contestable and contested; rational knowledge becomes an ongoing process of critical interpretations. These are power-sensitive conversations. As Haraway argues:

Science becomes the myth, not of what escapes human agency and responsibility in a realm above the fray, but, rather of accountability and responsibility for translations and solidarities linking the cacophonous visions and visionary voices that characterize the knowledges of the subjugated [...] for the sake of the connections and unexpected openings [that] situated knowledges makes possible (Haraway, 1988, p. 588).

In this sense, Haraway calls for a relational understanding of science, where the cacophonous and visionary voices of the subjugated can be heard and taken into account. Acknowledging situated knowledges can bring forth worlds that escape domination by the juxtaposition of nature and culture: worlds that are less organised by axes of domination and that give space for embodied knowledge to be taken into account (Haraway, 1988, p. 585). As Suchman (2008, p. 146) argues, feminist theorists have extensively documented the subordination, if not erasure, of the body within the Western philosophical canon. So it is necessary to recognise the place of the body and embodied knowledges in the production of knowledge. Further, Katherine Hayles (1999) suggests that embodiment takes the form of extended cognition, in which human agency and

thought are enmeshed within larger networks that extend beyond the desktop computer and into the environment.

An understanding of science as practice brings forth several possibilities. First, the products of science are seen not as the ultimate achievements of human mastery, but as “islands of stability” that are continually being made and unmade, attending to the spaces and temporalities in which they emerge. Thus, the future emerges in real time during scientific practice (Amoore and De Goede, 2008a; Pickering, 1994). Fluxes of becoming transform not only these “islands of stability”, but also their human counterparts. Second, an emphasis on the embodied and localised practices of science, resist the politics of closure and finality and allow for the subjugated to be taken into account. It is “precisely in the politics and epistemology of partial perspectives that the possibility of sustained, rational, objective inquiry rests” (Haraway, 1988, p. 584). And finally, the performative understanding of science has an important effect: “what we think of as a single object may appear to be more than one” (Mol, 2002, p. vii). The multiplicity of reality makes space for unexpected becomings to emerge. For the purposes of this thesis, engaging with the politics of situated and embodied knowledges will be the theoretical thread that develops my understanding of what constitutes forensic knowledge and who is allowed to produce it.

The subjective, intersubjective and embodied practices that constitute forensic investigative processes contrast with the precise, well-bound “objective” knowledge that we might typically associate with Mertonian understandings of science. STS research on forensic science has raised questions of epistemological significance, such as how “law and science maintain a balance between the contingency of legal decision-making, which involves specific sets of circumstances, and the scientific ambitions of universality and transcendence” (Lawless 2016, p. 2; see also Jasanoff, 1998). Hence why forensic scientists seek to make specific knowledge claims that pertain to a particular place and

time — what Shapin (2012) has called sciences of the particular. In what follows I will discuss the political possibilities of the term forensics and how evidence and law relate to the practice of forensic science.

Forensic Science: Evidence and Law

As I discerned in the opening moments of this chapter, the etymology of the term forensics derives from the Latin *forensis*, or the public forum. In practice, this term is related to “state forensics” or forensic science, the hybrid term between law and science that is firmly embedded in the criminal justice agenda. Forensic science is usually performed by state authorities in order to provide leads in police investigations and evidence to be used in domestic courts in support of criminal prosecutions. The use of forensic science in criminal cases and its relation to the criminal justice system stresses the importance of forensic science as a strong and accountable site of knowledge production. The certainty it provides is not just a matter of “objective” knowledge or accurate scientific procedures; it strongly depends on relationships of trust and accountability with and between the state and population. As Roberts (1996) argues, ensuring an adequate, transparent operation, and the unbiased provision of forensic science services is of primary importance for determining how justice, safety and security are assured in everyday practice, and in the experiences of institutions, communities and individuals.

As such, forensic science brings together different forms of expertise and knowledge, from crime scene examiners and managers, to laboratory technicians and specialists in disciplines as diverse as chemistry, molecular biology, forensic anthropology and engineering. A broad array of actors from the wider domain of the criminal justice system

can also be considered stakeholders in forensic science, such as: police officers, members of the judiciary, politicians, civil servants, commercial organizations, government bodies and the general public who come into contact with the police, or, as in accusatorial systems, may serve on juries (Lawless, 2016, p. 1; see also Fraser, 2010). Writing on these relationships, Edmond (2001, p. 192) has emphasized the roles played by non-experts in actively shaping the reception, development and use of expert knowledges in the legal system. He argues that the production of law-science knowledges is contingent on specific social interactions, traditions and assumptions. Thus, Edmond (2001, p. 194) developed the term “law-set” as a means of “structuring inquiry for lawyers, judges, scientists and social scientists.” The law-set is composed of a set of actors, who may not share the same epistemological backgrounds but are involved in “investigation, preparation, negotiation, administration, and decision making in relation to a particular legal controversy” (p. 194). The strategies employed by the law-set to produce and manage closure are dynamic, opportunistic, and strategic. Furthermore, the knowledge produced by the law-set is a combination of scientific knowledge, forms of legal procedures and practices, non-scientific knowledge, and social principles that combine to achieve an outcome that is socially adequate and suitable for future appropriation (p. 198). In short, participants in the production of forensic knowledge are varied and their expertise lies in their capacity to make claims in legal procedures, given that forensic science relates to the study and practice of the application of science to the resolution of social and legal issues (Forensic Science Foundation, 2017).

Forensic science rests upon the raw material of evidence. Evidence is the product of human and non-human interaction; it is enacted, crafted and continuously transformed. Forensic evidence has also been portrayed as a “silent witness”; as Locard’s “Exchange Principle”, which provides central tenet for the practice of forensic science, argues:

The principle is this one. Any action of an individual, and obviously, the violent action constituting a crime, cannot occur without leaving a mark. What is admirable is the variety of these marks. Sometimes they will be prints, sometimes simple traces, and sometimes stains (Locard, 1934, p. 7-8 in Lawless, 2016, p. 82).

Locard's "Exchange Principle" considers forensic evidence as a passive entity, a silent witness waiting for an expert to give it voice and let it speak; this is what has been referred to as the "forensic imaginary".¹⁵ According to Williams (2010), the forensic imaginary is the conviction that criminal events are knowable and can be reconstructed from forensic evidence, since there is always a decipherable last message from the victim and evidence from the perpetrator.

Contrary to the idea that evidence is a passive entity (i.e. a "silent witness" waiting to be interpreted) STS research regards forensic evidence as something that is shaped by science, law and the publics it gathers around. STS accounts of forensic scientific production argue in favour of a relational understanding of evidence, where there are no independent and objective fragments of a story. Rather, the narrative is an assemblage of different inscriptions and is product of forensic practice, with fragments pieced together to tell a credible story (Lynch et al., 2008; Jasanoff, 1998; M'charek, 2008). As Sheila Jasanoff points out, admissible evidence transforms the events of the outside world into a courtroom re-enactment with a kind of artifice that yet claims the power of accurate representation. As she puts it:

In every day litigation, as the material constituents of evidence are converted into scientific facts, their humble origins in the work of

¹⁵ Edmond Locard is a highly influential thinker in forensic science thanks to his work on crime scenes in Lyon, France, in 1910. The Locard Exchange Principle can also be explained with the following quotation: "Wherever he steps, whatever he touches, whatever he leaves, even unconsciously, will serve as a silent witness against him [...] This is evidence that does not forget. It is not confused by the excitement of the moment. It is not absent because human witnesses are. It is factual evidence. Physical evidence cannot be wrong, it cannot perjure itself, it cannot be wholly absent. Only human failure to find it, study and understand it, can diminish its value" Edmond Locard cited in M'Charek (2008, p. 521). It is worth noting here that this quotation has also been attributed to Paul Kirk (1974) in writings inspired by Locard.

individual eyes and hands get lost from view, and with this loss comes a forgetfulness about the shared social and scientific foundations of credibility (Jasanoff, 2012, p. 234).

In this sense, a STS approach to forensic science is not only interested in opening up forums where matters of concern are disputed, but also looks into the socio-scientific foundations of credibility and the humble origins of evidence crafting. In order to examine the shared social foundations of credibility in forensic science, STS has shifted its analytic scope beyond laboratories and court proceedings to incorporate a further set of *spaces*, *actors* and *practices* that shape forensic knowledge. For instance, studies have examined how forensic knowledge and forensic evidence is crafted by crime scene examiners in the moment, as practitioners decide what constitutes evidence by circumscribing a crime scene to a particular space, or by taking into account the socio-historical understanding of what constitutes a population for forensic DNA analysis (M'Charek, 2013; Schwartz-Marin *et al.*, 2015).¹⁶

Paying attention to the humble origins of forensic evidence has been particularly necessary since DNA analysis has been understood by the public, jurors, lawyers and some legal scholars as the “gold standard” in forensics, a “truth machine” (Lynch 2008) that produces “unassailable” or “infallible” evidence (McCartney, 2006, p. xii). The development of DNA technologies for forensic purposes revolutionised forensic science. Since its first appearance in Alec Jeffreys’ ‘fingerprinting’ methods in 1985, to the more recent technology use for the analysis of heavily degraded DNA samples and low template

¹⁶ For example, Schwartz-Marin *et al.* showed how forensic populations in Colombia are framed according to the dominant ethno-racial narratives of sameness and difference, regardless of how statistically meaningful genetic differences were found to be between populations. In the everyday practice of forensic genetics at the Institute of Legal Medicine and Forensic Science in Colombia, the racial categories of black, mestizo and indigenous were re-inscribed in the scientific process because they “made sense” according to the cultural and historical understandings of the “Colombian population”. While doing fieldwork in Colombia in 2011-2012, we found that if we used any regional genetic population that made up the “Colombian population” for the statistical analysis of likelihood ratios, the findings yielded almost identical results, meaning that there cannot be a statistical rationale behind dividing the “Colombian population” into different geo-racial zones.

DNA (Lawless, 2013), DNA identification methods had become an important tool for the investigation of crimes and identification of individuals (Williams & Wienroth, 2014).¹⁷

DNA Technologies for forensic purposes

In the Global North, DNA profiling has provided an especially powerful forensic resource for the enhancement of an “intelligence led” surveillance apparatus (Williams & Johnson, 2005). This has raised concerns about the development of technologies of biosurveillance that could be used to detect past, present and potentially future criminal conduct (Williams & Johnson, 2005; Lyon, 2003; Lawless 2010).¹⁸ However, Williams and Wienroth argue that, despite concerns about surveillance, the role of DNA technologies in resolving identity issues related to criminal justice, civil justice and biological relationship testing, will only be strengthened over the next decades (2014, p. 259).¹⁹

Attending to the different spaces where technologies unfold and are enacted, the development of DNA identification and forensic technologies in the Global South raises other types of questions with concerns beyond data privacy and fears over biosurveillance strategies. For instance, in Latin America DNA databases have been created to identify

¹⁷ In 1984, Alec Jeffreys and his colleagues observed the existence of highly polymorphic “minisatellite” regions that can provide an individual-specific DNA ‘fingerprint’ of general use in human genetic analysis. According to Jeffreys, the first application of this new technology was in 1985 when his technology was used in an immigration case to save a young boy. “It captured the public’s sympathy and imagination. It was science helping an individual challenge authority. Of all the cases this is the one that means most to me. The court allowed me to let the family know we had proved their case, and I shall never forget the look in the mother’s eyes.” (Jeffreys, *The history of genetic fingerprinting*, available at: <http://www2.le.ac.uk/departments/genetics/jeffreys/history-gf>, (Accessed March 2016).

¹⁸ For instance, since its creation in England and Wales in 1997, the National DNA Database has raised concerns about its broad coverage, under which DNA samples can be collected with no cap on how long can they be kept. DNA technologies allow modern governments to seek and utilise knowledge about their citizens. Therefore, concerns regarding violation of human rights and privacy, and questions over the capacities of the government for using increasing surveillance technologies, characterise academic and public debate (Dahl & Saetnam, 2009; Nuffield Council on Bioethics, 2007).

¹⁹ To argue this, they cite Kim and Katsanis, (2013, p. 329) to assert that government operated DNA databases will grow from approximately 30 million profiles in 2011, to 100 million profiles in 2015.

victims of human rights violations, and, thus, have played an important role in political, social and familial reconstitutions in post-dictatorship scenarios (Smith, 2016; Rosenblatt, 2015; Wagner, 2008). Research has suggested that forensic DNA identification technologies are a fundamental tool in the identification process of victims of violence, and are a core and contested site of identity formation for individuals and for the families affected (Haimes & Toom, 2014; Toom, 2015; Smith and Wagner, 2007). Although DNA technologies have revolutionized forensics and facilitate human identification, the process of identifying victims entails an intensive interdisciplinary endeavour. Forensic methods, such as fingerprint analysis or facial reconstruction techniques, rely on the “expert interpretation of observed patterns”, and, as such, their use is necessarily subjective. (Rosenblatt, 2015, p. 21).

STS approaches to forensic science have shown that scientific knowledge is not a passive product of nature waiting to being discovered, but a continually negotiated and crafted social product of human inquiry (Cozzens & Woodhouse, 1995). Scientific “expert evidence does not *itself* determine guilt or innocence; instead, its probative value depends upon circumstantial judgements that place the evidence within a story of the case at hand” (Lynch, 2008, p. xvii). As Lynch and Woolgar argue:

[W]hat scientists laboriously piece together [...]measure, show to one another, argue about, and circulate to others in their communities are not “natural objects” independent of cultural processes and literary forms. They are extracts, “tissue cultures”, and residues impressed within graphic matrices; ordered, shaped, and filtered samples; carefully aligned photographic traces and chart recordings; and verbal accounts. These are the proximal “things” taken into the laboratory and circulated in print and they are a rich repository of ‘social’ actions. (1990, p. 5.)

Among the highly standardised practices of forensic evidence production, objects are representations, “immutable mobiles” that can travel from messy crime scenes to

courtroom proceedings in which productive, contested and multiple realities can be built and judged to be more or less credible. According to Christopher Lawless (2016, p. 5) the production of “evidential meaning” derives from the subjective experience of forensic practitioners, informed by their experience of previous cases, as much as through ‘objective’ practices of ‘scientific’ meaning. Therefore, “the ‘technical contents’ of [...] [scientific investigations] made up a roster of ‘sociological’ topics, to be studied as *situated* processes of knowledge-production and not exclusively as methodological and epistemological concerns” (Lynch and Woolgar, 1988, p. 102). Considering this, M’charek (2008) uses forensic DNA profiles and the inference of visible traits as an example to argue that a DNA profile should be seen as an “articulate collective”. The term *articulate* places emphasis on DNA profiles as normative and active objects that make links between different sites and actors and order their inter-relations. This works in contrast to the embedded ideas of “objectivity” and neutrality with which DNA profiles are presented in courtroom proceedings, and in everyday life. The term “collective”, refers to the variety of humans and things that DNA profiles bring together in fluid configurations, depending on where and what versions of the profile are performed—whether a cheek swab, an electropherogram, a matching probability, etc. Thus an “articulate collective” is neither fixed nor stable (2008, p. 521). Further, considering the new ethical considerations brought forward by new technologies, M’Charek (2008, p. 527) argues that politics and normativity are neither *within* the technology as a mode of technological determinism, nor *outside* technology (e.g. in the context in which they are used). Rather, normativity and politics are performed in the relationships that technologies establish. In short, the political and normative attributes of technology are not given in advance but are performed in *practice*.

Thus, in an effort to study the situated processes of forensic knowledge production, I emphasise the diverse spaces in which forensic technologies are practiced. In this thesis

I follow an approach to forensic science derived from STS in order to explore the possibilities that forensic technologies offer to humanitarian actions, such as the identification of victims after a disaster (Williams & Wienroth, 2014; Bennett 2014; Haines and Toom, 2014), or the use of forensics to attend human rights violation cases. My research dwells on the latter, since one of the dilemmas of forensic technologies is that its practice relies on a legitimate governmental authority. Thus, forensic science has faced important structural adjustments in spaces where the state and its institutions subverts the justice system. This has been the case in the context of political violence in Latin America and the Balkans on the latter half of the 20th century (Wagner, 2008; Rosenblatt, 2015; Snow *et. al.*, 1989).

While there is a long history of the links between the state, security and the use of forensic technologies to create and govern populations, my research makes emphasis on the uses of these technologies to narrate stories that contravene male driven narratives of state control.²⁰ The alternative use of technologies opens up spaces for situated and embodied narratives of knowledge production that are missed by traditional understandings of the relation between forensic science and the state. Citizens' use of lists, DNA samples, statistics and the development of search strategies are one of the multiple ways in which the politics of possibility of forensic technologies can be explored.

²⁰ See for example Ian Hacking's analysis on the use of statistics to make up populations (1986, 1990), or for the history of fingerprints (Cole, 2013) both practices born from colonial contexts. . For a critical approach to border security see (Amoore 2011, 2013; Amoore and De Goede, 2008, 2008a). For an historical approach on the use of forensics as identifying and classifying techniques see Galton and Bertillon uses of anthropometry.

Forensic Technologies for Victim Identification in Disaster Scenarios and in the aftermath of Human Rights Abuses

The identification of victims in the aftermath of natural disasters, terrorism or political violence is imperative, but cannot always be carried out by state authorities.²¹ For instance, a lack of forensic infrastructure capable of dealing with complex human identification, or political denial of human rights abuses, pose complex challenges for forensic science in these scenarios. International agencies such as INTERPOL, the International Committee of the Red Cross (ICRC) and the International Commission on Missing Persons (ICMP) are some of the organisations that provide assistance to local governments in the processes of locating, recovering and identifying human remains. These interventions are generally offered in support of local governments that find themselves overwhelmed by an unexpected mass-death event in the aftermath of a natural disaster or terrorist event. In cases where state authorities are suspected to have been involved in human rights abuses, forensic independent teams are instructed to investigate crimes and to provide evidence to international courts.

Disaster Victim Identification (DVI)

The knowledge gathered from forensic evidence is not only used in domestic court proceedings for criminal prosecutions, but is also used as a tool for identifying the victims of disasters through Disaster Victim Identification (DVI) techniques. According to INTERPOL's Disaster Victim Identification Guide, a disaster is defined as an

²¹ Examples of these events can be found in the 1995 Genocide that occurred in Bosnia, the September 11 terrorist attacks on the World Trade Centre in New York in 2001, July 7 bombing attacks in London in 2005, to the 2013 collapse of a factory in Bangladesh, as well as aviation disasters, and the on-going violent disappearances in Latin America.

Unexpected event causing the death of many people. Many different kinds of events can lead to disasters which may require the use of the DVI process. [...] DVI processes may be required following traffic accidents, natural disasters, technical accidents (fires, explosions), terrorist attacks or events occurring within the context of wars. (INTERPOL, 2014, p. 8.)

Due to the complex nature of disaster scenarios, DVI teams work through the deployment of an interdisciplinary set of experts, with the identification of victims emerging through collaborative work (INTERPOL, 2014). The identification of victims in such scenarios also highlights the particular politics of forensic processes. As Rosenblatt argues (2015, p. 30), some forensic experts consider it a form of cultural imperialism to impose DNA identification programs that individualise each body and separate them in individual graves upon cultural contexts where the community prefer to bury their dead in collective graves. Similarly, Haines and Toom (2014) have critically analysed the understanding of kinship in the aftermath of the Srebrenica genocide, while Merli and Buck (2015) have emphasised the biopolitical dilemmas that emerged during the identification process of victims in post-tsunami Thailand.

DVI processes are frequently put into practice as part of investigations into human rights abuses, particularly for the identification of victims of political violence.²² Forensic humanitarian action requires the collection of data related to causes of death and to enable the identification of victims, in order to bring forth evidence that can help to elucidate the extent of the violence, and the agents responsible of perpetrating it.

²² See, for instance, the work of forensic anthropologist Clyde Snows and his team of students who worked to identify victims in post-dictatorship Argentina, or the international array of experts investigating mass graves in the former Yugoslavia and Rwanda in the 1990s (Rosenblatt, 2015; Wagner, 2008).

Victim identification in the aftermath of political violence: Argentina and the development of human rights forensics

The first time that forensic technologies were used for documenting human rights abuses was in Argentina in 1985, when a group of international forensic scientists arrived in the country to provide expert technical assistance in the identification of thousands of victims of “state sponsored or tolerated human rights violations” (Dieterich, 1986, p. 40; Snow *et al.*, 1992; Rosenblatt, 2015; Smith, 2016).

During the Cold War period, the U.S. pursued an active, interventionist foreign policy in Latin America under “Operation Condor”, spreading propaganda to attempt to thwart communist uprisings in various regions, as well as supporting (even implanting) authoritarian governments. As Dieterich argues (1986, p. 51), at the end of the 1960s the efforts to control growing urban protest movements and urban guerrilla groups generated an increase in the number of disappearances, tortures and political killings under the military dictatorships in Brazil and Uruguay, and reached a tragic climax in Argentina’s ‘Dirty War’ between 1976 and 1983. During this time, people were abducted from their homes, spaces previously deemed private and safe, and were held captive in clandestine detention centres where a “new subjectivity would be hammered out” (Taylor, 1997, p. 151). Even though human rights violations and disappearances occurred throughout South America during Operation Condor, this chapter focuses on the Argentinian case, as the investigations carried out in response to these human rights violations also provide a reference point for the development of forensic expertise — specifically for forensic anthropology in the region. According to Rosenblatt (2015), Argentina can be deemed the birthplace of international forensic investigations, due to the networks of expertise that were established and consolidated between the U.S. and the southern cone states during this period.

Shortly after a democratic government was established in Argentina, Raul Alfonsín, the recently elected president “pledged to investigate and punish those responsible [for the disappearances, and human rights violations], and ordered the prosecution of the junta leaders” (Snow, *et al.*, 1991, p. 384). In 1984, civilians—including judges, the relatives of disappeared people, forensic pathologists, police and media personnel, among others—gathered around graves in local cemeteries marked “NN” (“No Name”). These mass graves contained some of the bodies of those who disappeared under the eight years of military rule. As Doretti and Burell describe:

[T]he press photographed bulldozers digging up several individual graves at once, skulls and other bones flying from their shovels. Untrained cemetery personnel tried their best to recover skeletal remains but left behind small bones, including teeth, and other evidence such as bullets. The bones were broken, lost or mixed up. Skulls were piled in one place and postcranial bones in another, destroying the relationship between the skull and the rest of the skeleton. Television screens showed doctors holding skulls with gunshot wounds (2007, p. 60).

In the light of these events, nongovernmental organisations, most notably the Grandmothers of the Plaza de Mayo, and the recently formed National Commission on Disappeared Persons (CONADEP), requested forensic technical assistance from the American Association for the Advancement of Science (AAAS) in conducting the analysis of these mass graves. In 1984, Clyde Snow, forensic anthropologist, and Eric Stover, human rights researcher, arrived in Argentina. Having witnessed the exhumations conducted by local authorities, Clyde Snow called for a “halt to all *unscientific* exhumations and asked local archaeologists and anthropologists to get involved in the process of exhuming the dead” (Doretti and Burell, 2007, p. 60, my emphasis).

At this time, most of the forensic experts, pathologists, and morgue technicians in the country were thought to be part of, or at least complicit in, the crimes committed during

the dictatorship. If forensic science practitioners are to be trusted by civilians, they need to be distanced from local “legal-medical systems and other governmental institutions that had reportedly committed crimes or had lost credibility during lengthy periods of human rights violations” (Doretto and Burell, 2007, p. 60). Therefore, scientists from the AAAS trained anthropology and biology students who were interested in helping with the identification of victims. It has been argued that since Clyde Snow and his students began exhuming the graves of disappeared persons in Argentina, there has been a theoretical departure from the medico-legal understanding of forensics (Rosenblatt, 2015, p. 6). This was the first time that forensic science was used “outside” its common practice in criminal cases and ventured into investigating human rights violations committed by state authorities.

International forensic experts continued to visit Argentina over a couple of years. Snow visited the country many times over five years to train the group of young anthropology students. In 1985 this group became formally known as the Argentine Forensic Anthropology Team, (*Equipo Argentino de Antropología Forense*: EAAF). The team was comprised of recent graduates from forensic archaeology and anthropology who had all responded to Snow’s request for trainees, and received practical training while carrying out the exhumations of more than 9,000 victims of the military dictatorship (CONADEP, 1984). The creation of the EAAF was followed by the foundation of other independent forensic teams in the region. The EAAF helped to train forensic teams in Chile in 1989, in Guatemala in 1992, and in Peru in 1999, and, most recently, in Colombia in 2004 (Doretto and Burell, 2007). The development of forensic expertise in response to human rights violations in the area consolidated Latin America as the pioneer in forensic humanitarian work (Rosenblatt, 2015).

Since its formation, the EAAF has branded itself as an “independent” forensic anthropology team. The EAAF’s independence was guaranteed from its formation; the

EAAF were trained by an international expert, and at that time, none of its team members had links to either governmental institutions or the military junta. This allowed the EAAF to be seen as trustworthy, not only by family members who were actively looking for their loved ones, but by the public in general. However, since this initial forensic work the group has been supported by new democratic institutions. Raul Alfonsín's democratic government openly condemned the military junta leaders and set out to investigate the crimes committed and to punish their perpetrators. The consolidation of the EAAF as the first forensic team to investigate human rights abuses in the country was, then, underwritten by the support of President Raul Alfonsín's new democratic institutions. After all, these institutions were interested in documenting the crimes committed under the dictatorship. As Mercedes Doretti, founding member of the EAAF, explains:

The work [forensic investigations] is conducted under a judicial system or special body with a mandate that basically establishes what will be done and the questions or points of expertise that must be addressed. We do not dictate the rules of engagement, or what cases are to be investigated. These decisions are often the result of a balance of forces during transitional moments (Doretti, 2009, unpaginated).

As an example of this, soon after Snow and his team started collecting evidence, a series of immunity laws for human rights violators closed off the possibility of this work to be used in legal proceedings (Rosenblatt, 2015). In response, while the identification of human remains and the exhumation of mass graves was taking place, the nongovernmental organisation, The Mothers of Plaza de Mayo, contested the political framework of the exhumations. The Mothers wanted to shift the focus away from identifying human remains and securing economic reparations for victims, and towards holding the perpetrators accountable for these crimes (Moon, 2013). As one of them explained:

I am asking for [my daughter] alive, because if she isn't, I want to know who killed her and I want that assassin to be put in jail. If I ask for her corpse, then I am killing her[...] (Guzman-Bouvard, 1994, p. 139 in Moon, 2013, p. 17).

In 1984, the mothers launched the “Bring them back alive” campaign as a way of contesting what they considered to be the state’s attempts to erase the disappearances of their sons and daughters. The group insisted that no forensic examination should be carried out on any remains unless was preceded by an “exhaustive enquiry to determine who gave the orders to torture and disappear” (Moon, 2013, p. 17). Due to the limitations imposed by the governments’ decision to impede the possibility of legal procedures, Snow and his team began to direct their efforts beyond courtroom settings, in aid of the surviving relatives of the victims. Thus, the forensic team “began to talk about [the importance of] grief, history, and ritual” as part of their practice. (Rosenblatt, 2015, p. 6).

As Claire Moon (2013) argues, bones have politics; forensic knowledge makes powerful and unpredictable claims in social and political life. The families of the disappeared in Argentina wanted their offspring to be returned to them, but they would not accept forensic identifications reports that did not recognise those who had been killed and disappeared as political subjects who had actively opposed the military junta’s violent regime. Similar efforts for the forensic identification process to be recognised as both a scientific and a social process are drawn out by Sara Wagner’s (2008) analysis of the identification process of victims from Srebrenica’s genocide in 1995.

According to Rosenblatt (2015, p. 6) from the first human rights forensic exhumations in Argentina, forensic investigations have been crafted from a complicated relation between: evolving scientific techniques (most notably the advent of forensic genetics); a growing international consensus on the moral obligation to investigate human right violations; the consolidation of the requisite legal bodies to prosecute these violations, along with the

particular political and legal challenges of any given post-conflict context. Even though forensic practitioners, as Rosenblatt suggests, are aware of the multiplicity of actors and interests involved in the practice of forensic investigations, practitioners' reflective accounts on the power relations and politics embedded in their practice seem non-existent. Forensic experts involved in these cases have long maintained that their scientific role in attempting to unravel the truth of past crimes has not been tainted by politics. As Snow *et al.* explain:

Tradition has vested the profession with a solemn authority to speak for such victims. Implicit in that is a responsibility to speak impartially and truthfully. The dead cannot perjure themselves; only human failure to listen and interpret the evidence can dishonour their final testament (Snow, *et al.* 1991, p. 390 see also Stover & Ryan, 2001, p. 7).

Adam Rosenblatt's interview with Snow in 1993 shows a similarly Mertonian understanding of science. While reflecting on his career, in which he served as a catalyst and long-time leader in forensic science's role in documenting human rights violations throughout the world, Snow declared: "I'm not a human right's activist. *I'm a scientist. I'm an expert.* If I have a philosophy, it is that I'm anti-homicide" (Rosenblatt, 2015, p. 18, my emphasis). This view of science as the pursuit of the truth has left several scientific experts to draw distinctions between "scientific" and "unscientific" work, or between "science" and "politics". But, as STS approaches to science and knowledge have long shown, politics is not restricted to elections, presidential candidates and the law, with which most scientists have little or no involvement. But, if we understand politics as the "spokesman of the forces you mould society with and of which you are the only credible and legitimate authority, then scientists are *fully political persons*" (Latour, 1983, p. 158, my emphasis). STS approaches to forensic identification have shown that victim identification operations are, in fact, deeply political endeavours as they spark, among

others, ethical, emotional and religious controversies (Toom, 2015, p. 3; Wagner, 2008). In the case of Snow's work at the EAAF, the processes of identifying victims was fully political from its outset. Moreover, in assuming that, as scientists, their role was to speak impartially and truthfully on behalf of the dead, the EAAF's practice was, already, fully political. In short, science and technology have always been political endeavours, though some scientists, as Snow's interview illustrates, are keen to dismiss it.

Lindsay Smith's (2016) analysis of the Argentinian case concludes that human rights forensics, "a movement that began as an indictment of the state for the forced disappearance of its citizens, its obfuscation of their lives, their deaths and even their burials," has "increasingly become allied with state and military officials in order to fund its identification work" (2016, p. 15). Smith argues that this shift can be seen through the ways in which family-centred approaches to the identification of victims have changed. Previously, there was a long-term engagement of experts with the affected communities, which provided the necessary information for the identification of victims. More recently, however, these approaches have been displaced by a strong reliance on DNA identification techniques, such as those used in the former Yugoslavia, in which the data given by family members via an ante-mortem questionnaire and anthropological analysis of human remains was, although important, subordinated to the certainty provided by forensic DNA analysis and profile matching databases.

However, as I contend in this thesis, human rights forensics is not "disappearing". Nor are "new" technologies, such as DNA analysis or big DNA Databases, "depoliticizing". Rather, these approaches are problematic in that they strongly reproduce the traditional forensics framework where "subject" and "object", "scientific" and "unscientific", "politics" and "science" are divided; this is a premature process of closure and purification (Latour, 2005). My analysis of STS approaches to science-as-practice and the understanding of "islands of stability" are useful when considering the scientific

process as a dance of agency that avoids foreclosure and the mastery of the “object”. This model opens up possibilities for the scientific process to be revisable in practice and open-ended into the future. Thus, in this thesis I propose to study forensic investigations as situated processes of knowledge-production that allow for one object to be multiple, while not reducing alterity to an exclusive methodological and epistemological concern. Following from Pickering (2016), the challenge is to take different ontologies seriously.

Thus far, I have engaged with how *forensis* is understood as a hybrid discipline operating between law and science, and I have examined whether the construction of the technical contents of scientific investigations should be studied as situated processes of knowledge-production and not exclusively as methodological and epistemological concerns. In the next section, I will explore the political forums of *forensis*, where scientific knowledge is produced not only by the pre-established actors provided by the criminal justice system (the law set), but also as political forums, where citizens, non-experts can make a claim.

The *Forum* in Forensic Science as a technology of participation

Starting from an understanding of *forensis* as “pertaining to the forum”, Eyal Weizman’s research agency Forensic Architecture (FA), offers a model to reorientate and expand the practice of contemporary forensics by critically evaluating the epistemologies, assumptions, protocols and politics of forensic knowledge production through an historical, theoretical and artistic approach (Weizman, 2014, p. 11). FA investigations take place in “frontier zones”, spaces outside the effective control of states, in lawless battlefields where established forums do not always exist —and, thus, need to be created. Examples of these spaces are the Mediterranean Sea, some parts of Somalia and Yemen, areas of West Pakistan, and Gaza, where powerful states can both inflict violence and, at

the same time, deny having done so (Weizman, 2014, p. 11). The forums created by the FA bring new material and aesthetic sensibilities to bear upon the legal and political implications of state violence, armed conflict and climate change (Weizman, 2014, p. 9). The FA operates by “inverting the direction of the forensic gaze” from a state’s policing of individuals — the complete view from above— towards the detection and interruption of state violations. As Weizman explains, this practice:

[T]urn[s]forensics into a counter-hegemonic practice, able to invert the relation between individuals and states, to challenge and resist state and corporate violence and the tyranny of their truth. Transformative politics must begin with material issues.(Weizman, 2014, p. 11.)

If, as Weizman suggests, “transformative politics must begin with material issues”, then the FA’s project to change the direction of the forensic gaze is made possible thanks to the widespread, and seemingly ubiquitous, accessibility of digital data derived from the images gathered by activists, which can be quickly disseminated via mobile phone, cloud, and social networks. Hence, from aerial photos, photo stills from videos and other aesthetic materialities the project produces, transformative politics can be seen. (Weizman, 2014). The collection of this data requires the development of new practices of analysing, interpreting, verifying, decoding and questioning. In this case, *forensis* is not only the practice of the critical production of evidence, but is also the querying of the practices of evidence making (Weizman, 2014, p. 12).

Following on from Latour (2005), the FA project aims to create forums for the discussion of objects not as matters-of-fact but as matters-of-concern. The forums it creates are “technologies of persuasion, representation, and power —not of truth, but of truth construction” (Keenan & Weizman, 2012, p. 67). Thus, the forums that the FA creates are not concerned with single objects in isolation, but with the sets of relations among objects that connect people and things, human and non-humans, documents, images, weapons, skulls or ruins.

Considering the notion of aesthetics and its relation with sovereign decision in contemporary security practices, Louise Amoore (2013) argues towards the aesthetic capacity of data to “overflow their crafted outlines” (p. 145) and live on to take “unexpected and unanticipated effects that are not in the design of the security apparatus itself” (p. 131). In short, the beauty of data and data gathering practices does not lie in the “capacity to reveal an objective and emergent picture through the arraying of its various elements” (p. 132), but rather in data capacity “to act, to affect, and to be affected thus substantially exceeding their design as objects” (p. 133).

Lorraine Daston (2007) argues that the most interesting facts are not given but made, and are artefacts in the best sense of the word. Thus, the making of facts depends on an aesthetic balance of images that change in front of our eyes, changing the ways in which we see and comprehend. The word “conviction” in the context of court proceedings, “articulates the legal verdict with the subjective sensation of confirmed belief, of being convinced”. (Keenan & Weizman, 2012, p. 24). This kind of decision, then, relies on aesthetic operations, on the way and order by which things and events appear in front of us.

Contrary to Weizman’s argument (2014, p. 9), the use of the term *forensis* for (in the main) medico-legal purposes does not necessarily mean that its potential as a political practice has been lost. On the contrary, I suggest that the potential of forensics as a political practice has always been present, even in the “narrow”, medico-legal sense of the term *forensis*. This is the case, for example, where states have used forensic science and the criminal justice system as biopolitical technologies to govern populations. For instance, in the case of Argentina’s disappeared, after the “subversive” individuals had been subjected to torture and imprisoned inside clandestine detention centres, their bodies were returned to the “legal domain” and reintegrated into society using institutionalised

medico-legal practices. According to Ranalletti, one of the ways in which the bodies were returned to normal bureaucratic and forensic channels was:

[T]hrough the registration and burial of the corpse in an official cemetery, the referral of the body to a morgue, with the agreement of the authorities, and the body being labelled “unidentified” following an autopsy and/or visual examination by a morgue’s medical examiner; recording the murder as having resulted from combat between security forces and guerrilla forces, or a prisoner attempting to escape; or leaving the bodies in the street and later collected by the police as a result of complaints being made by local residents. (Ranalletti, 2014, pp.162-3.)

Therefore, *forensis*, understood in the medico-legal sense as the application of science to the purpose of the law, as well as in its etymology (“pertaining to the forum”), is always already a political practice. Considering its innate politics Weizman proposes the creation of a “*new forensis*” that takes into account the complexity of the emerging scientific-aesthetic-linguistic field, and challenges the assumptions of mainstream forensic practices (Weizman, 2014, p. 10, emphasis in the original). This proposed “*new forensis*” is relevant since it opens up spaces for political contestation. However, the suggested inversion of the gaze seems to reinstate the ideal of the Archimedean scientific endeavour whereby truth can only be achieved through science and technology: a practice of forensics that separates itself from subjectivities and the “frailty of witness memory” (Weizman, 2014, p. 10). Even though Weizman asserts that the scientific-aesthetic-linguistic field is never conclusive, but subjected to probability calculations and margins of error, the FA project does not take into account the embodied knowledge that can be produced by the view from the body. The inversion of the forensic gaze cannot only consist of using the very same technologies to observe the state, but must also account for embodied knowledges developed by those who are victims of violence.

Thus, this thesis advances the notion of a feminist forensics that not only changes the direction of the “gaze” and the employment of new viewing technologies as investigative tools of political processes and their consequences, but also calls for a view from “somewhere”. That is to say, from an always contradictory body: from situated and embodied knowledges developed as consequence of violence and marginalisation. A feminist forensics requires that “new” actors are allowed to make claims and participate in the production of forensic knowledge within forums. For the purposes of this thesis, forums are created in everyday citizens’ practices of searching for disappeared persons and thus, challenge normalised forensic science in Mexico.

Concluding Remarks

This chapter examined the development of STS and Actor-Network-Theory, contrasting these approaches with human-centred, structuralist-functionalist and Mertonian approaches to scientific knowledge production in order to situate the present study among existing literature in the field. I was specifically interested in delineating feminist approaches to materiality, practice and ontology (Pickering, 2016; Barad, 2003; Mol, 2002; Haraway, 1988), as a springboard to engage with the ways in which science and politics have been separated by forensic practitioners working in the Latin American context.

The notion of forensics has recently undergone a profound shift from conceptualising forensic science as a law-science hybrid in which knowledge claims are presented and contested in courtroom proceedings, to the notion of forensics as a technology that opens up multidimensional spaces for politics, where claims and counterclaims can be made. Additionally, I have argued that it is necessary to allow for “new” voices to be heard in

these forums, by considering the evidence put forward by forensic anthropologists, archaeologists and lawyers, but also by allowing citizen forensic knowledges to be embedded in these spaces.

International efforts for identifying victims of atrocities have spread all over the world. Work by Snow and Stover across a number of countries made it possible for a group of young Argentinian anthropology students to found the EAAF, which currently intervenes in several humanitarian crises around the world. Experts that span national boundaries are commonly seen as part of humanitarian efforts and, through the practice of “objective” forensic science, they unravel the truth of the crimes committed. However, this view of forensic science seems to forget that scientific technologies are themselves contestable, political sites. As Rosenblatt argues, “even where forensic investigations are not focused on legal outcomes, but rather on identifying bodies or constructing a historical record, a process of open reflection about assumptions, limitations, and trade-offs can be woven into forensic practice” (Rosenblatt, 2015, p. 22). Here Rosenblatt is referring to what Wagner’s (2008) research on the identification process of Srebrenica’s victims clearly showed: the double nature of forensic identification processes, as a scientific as well as a social process. However, while both approaches recognise the politics within forensic techniques, little attention has been paid to how citizens’ transgressions of expert/scientific and political boundaries within nation states transform the ways in which we understand and engage with forensic knowledge production—probably because this is a rather specific phenomenon happening in low intensity conflicts in which the state and organised crime closely collaborate, as in Mexico and Colombia (Schwartz-Marin and Cruz-Santiago, 2016).

Throughout, this thesis I will show how the families of disappeared persons in Mexico are engaged precisely in struggles over the meaning of forensic science, its place in the world and its place in addressing their missing loved ones. To facilitate this discussion,

new approaches to evidence production need to be taken seriously. Thus, this thesis engages with a feminist STS that pays attention to the situatedness of forensic knowledge by emphasising forensics as an opening up of spaces to enable different understandings of justice and truth that are not necessarily linked to courtroom proceedings. The STS approach to a feminist forensics provides an ontology that allows for citizens looking for their loved ones to be considered as bearers of knowledge and agency, making actual contributions of forensic knowledge while remaining deeply linked to their own identities, cultures and ontologies.

Chapter Three: On Methods

This chapter outlines my ethnographic approach to conducting fieldwork during 2014-2015, detailing my experiences with the relatives of disappeared persons in Mexico City. In this chapter I will explain how I made contact with the families of disappeared persons in Mexico, who these families are, and how their internal familial structures have changed as a consequence of the disappearance of one of their members. In addition, the geographies of risk that I encountered through my fieldwork are explored here, both externally and internally. External geographies of risk are understood here as the sites that security organisations and databases point as unsafe spaces in the city, while internal risks are their experiential counterpart: how I encountered these unsafe spaces through fieldwork. The last section summarises the sites in which I conducted fieldwork, and provides a glimpse of the unexpected places and situations in which I found myself while conducting research. In order to explore my multiple roles in the field (as a doctoral researcher and Co-Investigator of an ESRC funded project) my methods are presented in this chapter similarly to the accounts in my field diary. In what follows I reflect on the emotional toll of hearing stories of insecurity, violence and grief. As Crang and Cook (2007, p. 165) argue, it is precisely by creating vulnerable texts that we admit that the “strength of ethnographic research and writing includes its affective capacity to move us and to evoke an emotional response.”²³

²³ See also Ellis and Bochner (2000).

Why Disappearances in Mexico?

Mike Crang and Ian Cook (2007, p. 170) argue that our choices of research topics are frequently attuned to our personal experiences and interests. Many of the families, whose stories I narrate in this thesis, told me that individuals become involved in disappearances either as a result of *disgrace* — because someone you love has disappeared, or through *grace*.²⁴ According to the families I came across, I had arrived at this research topic thanks to *grace*. In 2007, I left Mexico City, and, since then, I lived short periods in the U.K., Mexico City and Colombia.²⁵ This privileged position gave me the opportunity to see Mexico from the “outside” and to learn how the international community responded to media portrayals of the rising levels of violence and insecurity in the country during the most agitated years of the ‘War on Drugs’. At the same time, I had a clear sense of how Mexico works from the “inside”, and how difficult it can be to deal with the state’s bureaucracy, and corrupt institutions. In fact, it was my dual position as an “outsider”/“insider” that made me reflect on the violence and insecurity that dominates lived experience in the country. Through this position I began to consider how these dangers were affecting civil society and, to some extent, I made my first steps in critically addressing the role of science and technology as a guarantor of “objective” knowledge and security.

I lived in Bogota, Colombia, for one year from 2011 to 2012, during which time I worked as a research assistant for Professor Eduardo Restrepo at *Pontificia Universidad Javeriana*. As part of a research team I conducted ethnography at the DNA Laboratory at the National Institute of Legal Medicine and Forensic Sciences. STS research has long

²⁴ Since the topic of disappearance is overlooked and avoided by so many Mexicans, the families I met in Mexico understand anyone’s interest in this tragedy beyond a personal quest for truth and justice as stemming from “divine grace” (Cruz-Santiago, Field Notes 2014-2015).

²⁵ I lived in Mexico City from September 2008 – until November 2010, in Colombia from October 2011 – September 2012, and in Mexico City for a further year from June 2014 to July 2015 when I conducted my doctoral research.

been interested in laboratory studies, and in the “study of the *cultural* activity of science” (Knorr Cetina, 1995, p. 143; Latour, 1987; Latour and Woolgar, 1979). During my ethnography I followed DNA samples as “immutable mobiles” objects that have the properties of being mobile, but are also immutable: “*presentable, readable and combinable* with one another”. (Latour, 1987, 1986, p. 7 emphasis in original). Accordingly, I followed the collection of DNA samples, in the form of bodily fluids (blood, saliva) or bone fragments, and into their multiple transformations through the processes of sample preparation for PCR analysis, the creation of statistical reports and their presentation to different publics. I was especially interested in how DNA was presented via expert witness cross-examination in oral trials, or in private spaces, such as when families are awaiting paternity results following charges of sexual abuse.²⁶ While tracing these transformations I became aware of how forensic science depends upon a delicate balance between techno-scientific processes and public trust.²⁷ Through these experiences I acquired a better understanding of forensic sciences, specifically, forensic identification processes, which are pivotal in dealing with Colombia’s long struggle with violence, drug trafficking, and disappearances.

It was through this experience, along with my contact with Mexico from an “outside” perspective, that I learned of cases of corruption the misidentification of human remains, and families’ struggles to locate their absent family members. In 2012, as a consequence of my participation in Global Impact Challenge Mexico, I successfully obtained funds to lead a team of three researchers to pilot the idea of creating the first citizen-led DNA

²⁶ I got interested not only in how the relation between forensic science and law can determine ‘guilt’ or ‘innocence’ in a criminal case, but also on how people make sense of forensic science results, the social and economic resources they invest in it, and the implications of these results in their everyday lives.

²⁷ For more on this see: Schwartz-Marin E., Wade, P., Cruz-Santiago, A., Cardenas, R., (2015) Colombian Forensic Genetics as a form of public science: the role of race, nation and common sense in the stabilisation of DNA populations in *Social Studies of Science*, 45(6), pp. 862-885.

database in Mexico.²⁸ In the same year I co-founded Citizen Forensic Governance, *Gobernanza Forense Ciudadana*: GFC, an NGO based in Mexico created with the aim of widening up public participation in the governance of forensic technologies, as a way to combat impunity and corruption. These experiences are relevant because they shaped the way in which my doctoral research unfolded and, at the same time, facilitated my ‘entry to the field’.

The ‘Field’: back home

Mexico

Country Overview: Control Risk Website²⁹

In response to the growing violence perpetrated by drug cartels, former Mexican president Felipe Calderón, deployed the military to confront the issue in 2006. Due to high levels of corruption in the police force, the newly reformed Federal Police also became a key element in the fight against drug cartels. These initiatives have failed to curb the violence, and drug trade-related murders have increased significantly since then. Several regions in Mexico, especially along the northern border region, have become extremely violent. While some states in north-western Mexico have seen a reduction in violent cartel-related crime, violence along the central-west coastline has risen.

The country now has the highest abduction rate in the world. While foreign travellers face a credible risk of abduction due to their perceived wealth, they are rarely targeted in such crimes. However, short-duration “express” kidnappings pose a risk to both foreigners and wealthy locals [...] (Control Risks Website, 2016).

²⁸ Global Impact Challenges are annual competitions held by Singularity University (A University founded by Google and N.A.S.A.) as a platform to identify outstanding entrepreneurs, leaders, scientists, and engineers with the most innovative ideas for positively impacting millions of lives locally and globally within 3 to 5 years. In 2012, I was awarded 25,000 dollars to pilot the possibility of consolidating a citizen-led DNA Database in Mexico.

²⁹ Travel Security Online, information taken from: <https://www.travelsecurity.com/Country.aspx?cn=127>. Accessed on September 12th, 2016.

I started my doctoral fieldwork in June 2014. I arrived in Mexico City with mixed emotions; on the one hand I was happy to be conducting fieldwork at home, and I was going to be there for a year, which meant I could spend time with my parents and siblings. On the other hand, and after finishing my risk assessments, consulting data from the Control Risks website and learning about high levels of insecurity and violence, I felt anxious and unsafe. I was not sure if I would be able to visit states in the northern part of the country, which were — and are — ranked as “high-risk”, and from which most of the citizen searches have been organised. I was going home, but I had a profound feeling of uncertainty and insecurity.

My access to the field was facilitated by two organisations: the first being the GFC, of which I am co-founder and president. Through the support of the GFC and its associated researchers, I had access to a set of interviews with families of disappeared persons in Mexico conducted in 2012-2013. Listening to these interviews marked by first exposure to the stories of insecurity and violence that have emerged from several parts of the country. Second, my role as Co-Investigator for the ESRC funded project “Citizen-led Forensics: DNA and Data Basing as Technologies of Disruption, Novel Ways to Learn and Intervene in the Search for the Disappeared in Mexico” (CLF), which ran from August 2014 to January 2016, gave me further exposure to this field of study.

This ESRC project created the first citizen-led forensic governance mechanism, where relatives of disappeared persons manage, govern and own their own forensic technologies: a DNA database made up of reference samples from family members and a citizen-led registry containing information on disappeared persons, narratives of disappearances and other various elements (hopefully useful for identification purposes). The aim of this citizen-led registry and DNA database is to collect independent data on the number of disappearances in the country, while, at the same time, enabling relatives who are willing to participate in the project to collect their own DNA samples using a

collection kit provided by the ESRC project, thus building a library of biological samples in the citizen-led database. CLF projects to collect up to 1,5000 DNA samples, of which (at the time of writing) 500 have been collected and analysed, with the results presented to the families. This project was designed with security and privacy concerns in mind, in part due to the lack of trust in the Mexican government. As such, the data from the citizen-led registry is stored at Durham University, while the citizen-led DNA database and the DNA profiles are stored in Guatemala. This has been facilitated through a collaborative agreement signed with the Guatemalan Forensic Anthropology Foundation, (*Fundación de Antropología Forense de Guatemala: FAFG*).

The support of these three organisations (GFC, ESRC and Durham University), has helped me enormously during my fieldwork. This has included administrative help in arranging meetings, particularly those I held with government officials and international organisations. Financially, this support meant that instead of having to visit several “high risk” states in Northern Mexico, I was able to ask the families to fly to Mexico City a couple of times during the year in order to spend time with them both “formally” interviewing them and having informal talks, sharing meals and accompanying them to their appointments with government officials. By spending one year in Mexico City, I was in contact with the interviewees over long periods of time, which enabled me to have continuous and varied discussions with them in different situations. I accompanied them, for instance, on street demonstrations, in their meetings with high level government officials and in designing the first citizen-led DNA forensic database in the country. Overall, this enabled me to see them in action “or perhaps more precisely, to see [them] in interaction” (Fine, 2003, p. 46)

My positionality in the field also changed as a result of my multiple identities. As Rose (1997) argues, positionality is never fixed, but is, rather, constituted in a series of responses to situated demands and audiences. In this sense, I was extremely conscious of

my role as a doctoral researcher and Co-Investigator of an international grant in my home country. I was conscious of my privileged upbringing which allowed me, as Kobayashi (1994) has argued, to have access to “the middle class luxuries, such as education and professional status that are still relatively inaccessible for most women of all backgrounds” (p. 76). I knew, too, that from this privileged position I was expected to be “the expert”. This expectation contrasted with a central principle of how the ESRC research was conceived namely as a Participatory Action Research (PAR) project, which entails challenging conventional hierarchies between “expert” and “lay” knowledge. I was there to learn *with* them.

As Haraway argues:

One cannot “be” either a cell or molecule – or a woman, colonized person, labourer, and so on – if one intends to see and see from these positions critically. “Being” is much more problematic and contingent. Also, one cannot relocate in any possible vantage point without being accountable for that movement. Vision is always a question of the power to see – and perhaps of the violence implicit in our visualizing practices. With whose blood were my eyes crafted? (Haraway, 1988, p. 585.)

No doubt my work was the result of privilege and inequality, a process that was set into motion long before I had the opportunity to access post-graduate education or live in different countries— something that shaped the “crafting” of my eyes.

This project employed an ethnographic and Participatory Action Research (PAR) methodology that considered research participants as project partners in the development of research strategies and technologies alongside the project investigators. PAR is an action-oriented research approach that is “grounded in people’s struggles and local knowledges” and challenges conventionally hierarchical relations between what we conceive of as “expert” and “lay knowledge” (Kendon, Pain & Kesby, 2007, p. 10). This

approach involves collaboration and the co-production of knowledge, where participants are understood as “reflective agents” who are able to be part of and take action in all aspects of the research process (Kindon, Pain & Kesby, 2007, p. 14). The co-production of knowledge was an ongoing and iterative process in all the interactions we had with the families, but was more intensive during the workshops we organised. The project organised three workshops in Mexico City, on September 2014, February 2015 and November 2015, respectively. The workshops lasted for three to four days, and we all stayed together in the same accommodation so we could have time to discuss, design and prepare activities to get to know each other. At the beginning of the project we provided participants with a notebook/field diary and later in the process we designed lab coats that read “Citizen-led Forensics” to be used when taking DNA samples. These material items deserve a special mention here because they played an important role during my fieldwork, particularly when boundaries around “experts” and “non-experts” were enacted (see chapter 7). The proposal of my doctoral research and the ESRC project were designed to complement each other. Thus, my fieldwork and the implementation of the project were closely linked. My findings informed the design of the citizen-led technologies and, in turn, the implementation of these technologies informed my ethnographic research.

Geographies of Risk.

Due to security concerns and risks assessments, my mobility within Mexico City and throughout the country was circumscribed. While planning my fieldwork, it was very clear how “external” geographies of risk were understood by both Durham University and “Control Risks”, the global risk consultancy that offers its services to the university. Both institutions had a clear understanding of how space can be mapped out by assigning

risk scores (low, medium, high) to each country in a three-layered way. First, they assign a risk score to the country. In the case of Mexico, *Medium Risk*. Second, they assign risk scores to specific states within that country. In Mexico, of its thirty-two states, twelve have been assigned a *High Risk* score.³⁰ To visit those states I needed approval from Durham University, and, in some instances, it was advised that spending the night should be avoided. Third, within each *high risk* state the “Control Risk” agency highlighted areas and certain highways that may pose a higher risk for the traveller. Thus, during my stay in Mexico I reassessed the decision not to travel to other states, especially *high risk* states in the northern part of the country, and ultimately, my fieldwork was conducted entirely within the limits of Mexico City. However, there were other instances where the boundaries between *high risk* and *medium risk* states were much more fluid, and less straightforward than expected. For example, the boundaries between Mexico City (*medium risk*) and the State of Mexico (*high risk*).

There are neighbourhoods in Mexico City that are part of both Mexico City and the State of Mexico. And so, during my travels within Mexico City I needed to pay careful attention to where the boundaries between “safe” and “unsafe” places are drawn. Moreover, within Mexico City, the geographies of risk were changing continuously. For instance, I attended three public demonstrations in support of the families of disappeared persons. During these demonstrations we walked through *Reforma*, the central avenue that leads to the main square in Mexico’s City Centre, *Zocalo*. I was allowed to attend these demonstrations as long as I stayed outside the *Zocalo*, where such demonstrations normally culminate. This was due to the violent clashes that might develop between protesters and the police, and a likely lack of personal security on my part as a result.³¹

³⁰ “Control Risks” considers the follow states to be high risk: Chihuahua, Coahuila, Nuevo León, Tamaulipas, Sinaloa, Guerrero, Durango, Jalisco, Morelos, Michoacán and Estado de Mexico.

³¹ On one occasion, clashes between police and protesters escalated so significantly that the main entrance to the National Palace (*Palacio Nacional*) was set on fire.

There were also internal geographies of risk that had to be negotiated, and which I had not anticipated. For instance, how much personal information I was comfortable sharing with the families I was working with. Since the beginning of my fieldwork, I had felt keenly aware of my privileged position, and one of these privileges was the access I had to documents, Human Rights violations' reports on Mexico and court proceedings from the Inter-American Court of Human Rights, which provided me with information and details on the personal lives and narratives of disappearance from people that, until that moment, I had not yet met. Moreover, I had personal information on their lives, gleaned from the visual and informational data from documentaries, newspaper articles and research reports I analysed that described how their lives were disrupted after the disappearances of their sons and daughters. Nonetheless, I did not want these families to know *everything* about me and those whom I love. This evolved over time, and I learnt to negotiate my own boundaries in terms of what I felt comfortable sharing and those things/moments that I decided to keep to myself. Yet, every-day spaces can suddenly become risky. For instance, the mere presence of armed bodyguards and security forces around the families of disappeared persons served to remind me that death threats are an ever present reality.

In/Security

Today, I agreed to accompany Victoria to her appointment at the Federal Prosecutor's Offices (*Procuraduría General de la República*: PGR). After finishing my interview with her, I got into my car and she asked me to give her a "lift". I accepted, after all we were going to the same place. But as soon as I started driving, a black van started following us. She said, "Oh! Don't worry, those are my bodyguards. I'm just fed up of being with them all the time, and wanted to change for a bit." I have never felt so tense while driving. The experience of having armed bodyguards following me all the time, instead of making me feel protected, helped me realise how exposed and insecure I am (Field notes August, 2014).

Having to negotiate these different levels of risk on a regular basis during this year was emotionally eroding. The more stories of disappearance I heard, the more I felt that to disappear was something that could happen to anyone, anytime, anywhere. Most of the families I have interviewed have received death threats. Therefore, they have asked the federal government to provide them with special protection, either via bodyguards, panic buttons or security guards outside their homes 24/7. This meant that during some interviews, an armed bodyguard was ever-present, or at least near our meeting point. This situation, as I wrote in my Field Notes, far from making me feel protected, made me yet more aware of how vulnerable these families are.

My experience of risk in Mexico City, in some cases, contrasted with the risk scores that companies such as Control Risks ascribed to certain spaces. As a researcher, sometimes it was more difficult to negotiate the internal geographies of risk with the families I was working with than it was to follow the well-delimited spaces that had been assigned a high risk score. In short, the contingency in the field, and the way I experienced the city, did not follow the spatial delimiting of analyst companies like “Control Risks”, and as with any ethnographical endeavour, I had to learn how to be flexible and attentive to the city, as well as to my interaction with others (Crang and Cook, 2007; Wolcott, 1995).

“We are the god-mothers of your thesis”³²

During my fieldwork I had the opportunity to interview eighteen families of disappeared persons. I had different levels of depth of relationships with each, and, as such, the time

³² Field notes entry, February 2015: the families I interviewed knew that I was doing fieldwork for my doctoral research which then would be written in the form of a thesis. On one occasion, after a long talk with Araceli, she approached to me and said, “*don’t you see? We are the god-mothers of your thesis.*”

I spent with them after interviews and through my year of ethnography was varied. I recognise that families are complex and cannot be understood as a single unit; thus, throughout this thesis I use the term “families” to describe a rather heterogeneous group of people. The disappearance of a loved one changes families’ inter-relations, configurations and ideas of kinship. It is important to emphasise that in most of the cases I analysed, the family member involved in the search for the disappeared person was female. This is explained by the fact that the great majority of the disappeared in Mexico are young to middle aged men. Women are, then, left with the responsibility of denouncing disappearances and engaging in search practices. However, I also interviewed fathers who are looking for their teenage children, and couples conducting searches together. During the search process, the family is reorganised, as the grandparents, uncles and aunts of the disappeared are also involved in search practices.³³

My fieldwork followed the ethical guidelines set out by the ESRC and Durham’s Geography Department. Because of this, I could only contact and interview families who were publicly visible in their search efforts and their commitments to find their loved ones. Families who engage in these practices constantly receive death threats and, in some cases, have been killed while searching. Therefore, families’ who continue to search despite the threats placed upon them are taking a deliberate decision by doing so. Thus my research was not perceived as endangering these families further. In this context, being highly visible seem to lessen the risks posed to participants (Ruse, 2015, p. 50)

All of the families I contacted have spent at least two years looking for their absent family member, and some of them were well known to government officials and human rights defender groups. Five of the families that I interviewed were already known to the research team at GFC, so I was introduced to them formally as soon as I arrived to

³³ See Appendix I for a table of the families I interviewed.

Mexico. The other thirteen families were contacted through a “snowballing” process, while always considering the visibility of their search strategies. During this first introduction I explained my doctoral research and my participation in the ESRC project. At this stage, families would usually just listen, ask questions about my university, and we would agree on a later date for a formal interview. All formal semi-structured interviews were recorded. At the beginning of each, an informed consent was orally agreed, recorded on audio and, in some instances, was also video recorded. The informed consent explained the extent of my research, the intended uses for the interview material and the particulars of the participants’ wishes for anonymity. My participants all wanted their names and identities to be fully disclosed, since, primarily, they desired the names of their sons and daughters to be known in Mexico and elsewhere. Even though consent was established from the first interviews, consent moved “from being a singular event to becoming a more ‘iterative’ or processual negotiation” (Darling, 2014, p. 207). This meant that consent was, and still is, continually revisited, since I have continued to be in touch with some of these families, and have sought their consent for, for instance, the photos I have used for my academic presentations and for this dissertation.

Data Collection

Under the aforementioned framework, I conducted eighteen in-depth interviews lasting between one and three hours. I also organised an activity/focus group during one of the workshops where participants discussed their understanding of “evidence” and shared their different narratives of disappearance. In preparation for this activity, families used different media (drawings, the use of clay for modelling and acrylics) to explain their understanding of “evidence” and “case constructionism”, i.e. the way in which they understood that a disappearance case is constructed through a narrative of events.



Figure 2 Focus group activity with families. Photo taken by the author.



Figure 3 'Evidence'. Left, clay model of a body found in a clandestine mass grave. Right, clay model of charred human remains found near a well. Photo taken by the author.

Over one year of fieldwork I was able to have informal conversations with families and regularly (at least twice a month) attended their weekly gatherings. It was during these meetings that some family members asked me to accompany them during their meetings with federal authorities. I also had the opportunity to look at some of their personal archives, notebooks, and legal documents relating to their disappeared loved ones. We shared meals, coffees and ice creams; they showed me new taco-joints in Mexico City, and we visited and discussed an exhibition on *CSI*, the U.S. TV drama, which was held

at a museum in Mexico City. In August 2014 I had the opportunity to walk alongside them in my first ever public demonstration to commemorate “The International Day of the Disappeared”.

While conducting the interviews, and in our “informal” talks, relatives spoke about their loved ones in both the past and present tenses. As Hester Parr (2013; 2015) argues, families engage in non-linear temporalities and “dialectical thinking” — I have a son and he is missing; he is present and absent. The same dialectical thinking was used to explain the knowledge these citizens have acquired, and how the narrative might have been different if they had known this information at the time of their loved ones’ disappearances — “I didn’t know what to do at the time of the disappearance, now I’ve learnt that...”. Thus, absent presences permeate this thesis throughout, either in the form of knowledge generation, or in the experience of the disappeared as expressed to me by their family.

Other sources of information

During my fieldwork I conducted formal interviews and informal talks with forensic practitioners from different disciplines in order to understand how forensic identification techniques work and to identify the role of family members in these processes. I gathered information from a forensic odontologist, two forensic archaeologists, three different teams of forensic anthropologists and two DNA analysts and case managers. These practitioners were not only from Mexico, but from Argentina, Guatemala, Peru, and Bosnia and Herzegovina.

Additionally, I gathered information from official documents and reports from national and international organisations. Most notably, the reports on human rights abuses and

disappearances from the National Commission on Human Rights in Mexico (CNDH), the Inter-American Commission on Human Rights (IACHR), and case files from the Inter-American Court of Human Rights (I/A Court H.R.).

The data from these reports was aggregated together and analysed along with information from non-governmental organisations such as Amnesty International, the Washington Office on Latin America (WOLA), The Open Society, Country Reports from the Argentine Forensic Anthropology Team (EAAF) and reports from local NGOs such as Bring Our Daughters Back Home (*Nuestras Hijas de Regreso a Casa*) and Justice for Our Daughters (*Justicia para Nuestras Hijas*).

A Comment on Field notes and Research Diaries

To keep a record of my ethnography, I had two field diaries. I always carried one of these to every meeting or interview. However, in most cases it was either difficult or inappropriate to write while the person was talking, so, as soon as the meeting finished, I would write down the main ideas that had been discussed. My other field diary contained personal reflections on important days, ideas, notes for questions and clarifications, as well as newspaper clippings from the national media on topics related to disappearances, forensic science and criminal organisations. However, as Wolcott (1995) argues, note taking is not complete until you return to your notes and make “notes-on-notes”. My note making continued during the writing up process of this thesis. Quotes from my field notes are approximate, some of them have been edited for coherence and translated from the original spoken and written Spanish. Quotes marked as being selected from interviews have been directly translated from transcripts. All translations are mine.

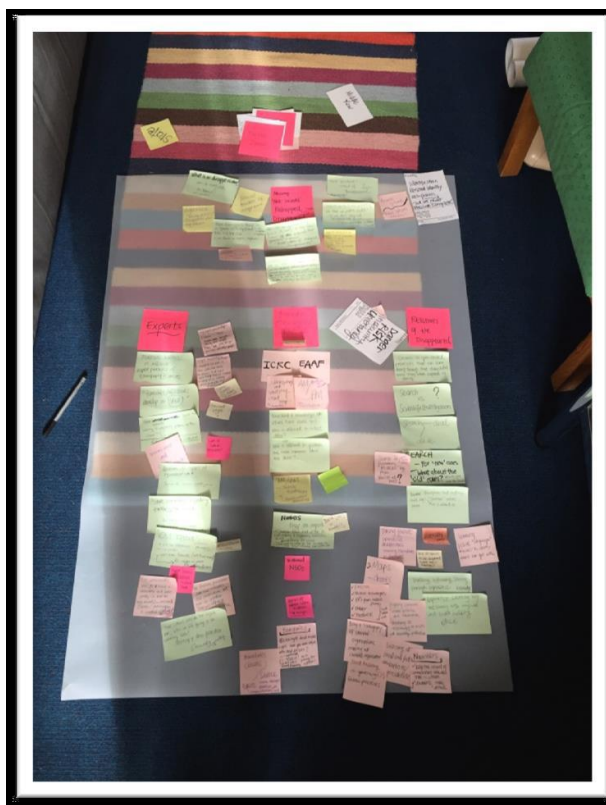


Figure 4 Mapping out ideas. Iterative process of writing and making notes-on-notes. Photo taken by the author.

Who searches for missing persons in Mexico?

My fieldwork sites varied widely: from the intimate spaces of family homes and the bedrooms of those who have disappeared, to public spaces in restaurants, cafes, conference venues and Mexico City's streets, where we would spend hours talking-walking-memorialising the disappeared. Through my long ethnographic work in the field, I gathered some important private documents from meetings, memos on legal initiatives, brochures etc. I also spent time in the federal institutions that handle disappearance cases, such as the Federal Prosecutor's Offices (PGR), CEAV, the Senate, etc. I attended national and international conferences in Mexico and The Hague, and visited the headquarters of the International Committee of the Red Cross (ICRC) in Geneva, where

I learnt more about identity cards and how they have been used in conflicts. I also attended the International Commission on Missing Persons (ICMP) conference “The Missing: An Agenda for the Future” at The Hague in October, 2013, and in July 2016 I visited the International Commission on Missing Persons (ICMP) DNA Laboratories in Sarajevo, as well as its Identification Unit in Tuzla as part of the Srebrenica University Summer Programme. Very important sources of information for this dissertation are the archives created by families containing materials that they have collected on their disappeared loved ones throughout their search. I am honoured to have had access to three family archives and diaries that the relatives of the disappeared have been gathering during the process of their searches up until 2016, and which, I know, have continued to grow and evolve, as have their own practices and quests for truth.

Considering the relevant questions of this research entails asking not only *who* searches for disappeared persons in Mexico, but also *where* these searches occur. During my fieldwork, I realised that the initial searches that families conduct are “deskbound searches”. This type of search (which entails visiting local or federal institutions, sending formal petition documents to police offices, etc.), is a search practice that is constantly performed by families, along with other types of search. Often, the relatives of the disappeared distrust federal government institutions and local authorities, but they will continue to follow and pressure the state to do its due diligence. Therefore, family searches to locate their sons and daughters occur both at an institutional level and on the ground. This means negotiating not only with different agencies as part of their search and attempts, but also performing search practices themselves, for instance analysing phone records, visiting “security houses”, interviewing local people, etc.³⁴

³⁴ “Security Houses” being places where kidnapped persons are held captive.

Initially I thought that by being located in Mexico City, I would not be able to interact with families from different parts of the country, particularly from the Northern part of Mexico —where the majority of citizen search practices have first developed. However, being in Mexico City gave me access to the federal institutions for the procurement of justice, who are responsible for the search and location of disappeared persons. And, families from across the country visit Mexico City regularly to follow up their cases, especially when local government institutions have not been able to locate their loved ones, which was the case for the great majority of disappearances. Thus, even though I was not able to visit them in their local states, I was able to contact families personally on a regular basis (I met with them at least four times in Mexico City during the four-day long workshops I held), as well as keeping up regular contact over social media networks.

In what follows, I describe the institutional spaces of search: the institutions that the federal government has created to deal with cases of disappearance. Families gave me access to these fieldwork spaces by asking me to accompany them to their appointments where they discussed the statuses of their cases with governmental authorities. Whereas, the decision to carry out research the National Institute of Forensic Sciences (INCIFO), was made since the mortuary became a crucial space for the families, who regularly mentioned it as both: a site they could visit to acquire knowledge of their loved ones, and as the space where forensic science is practiced.

Fieldsites

In this section, I delineate the governmental institutions where *forums* emerged for the disappeared to be acknowledged and where the search strategies deployed to find them were discussed. Since these institutions were part of my field sites, I visited them at least

five times during my year in Mexico. I gained access to these institutions through invitations from families to witness the meetings they held with government officials to assess the progress of their cases. As Jonathan Darling (2014, p. 209) argues in relation to asylum seekers in the U.K., the value of accompanying individuals to appointments with local authorities constituted both an act of support by just *being there*, and an opportunity for them to be treated differently, since asylum seekers reported that authorities changed their approach to them when a British citizen accompanied them to their meetings. However, I found that *being there* constituted a simultaneous, performed act of care that benefited both the families and myself: I was not only giving them my support during their meetings but, at the same time, I was also seen as worthy of trust by other families.

Mexico is a large, federal state in the midst of a transition to the adversarial legal system and the adoption of a new criminal procedure code (Open Society, 2016). The institutions I visited are all located in Mexico City. The head offices of all Federal Institutions are located in Mexico City. Jurisdiction over searches for the “disappeared” or “not located” persons is unclear. From the thirty-two states that make up the country, only twelve have a local prosecution office in charge of investigating disappeared persons’ cases. For the remainder of the states, the search for disappeared persons falls to local public prosecutors and police forces. There are no clear protocols for transferring local cases to federal level or for conducting joint federal-state investigations. Therefore, most of the families who are looking for a disappeared person need to file their case both at a local and federal level in order to have a better chance of locating their loved one. Given this situation, the families who can afford it visit Mexico City regularly in order to follow the case of their loved ones.³⁵

³⁵ Hence, a different “geography of search” develops, both at local and federal levels. For instance, there are states that have developed search protocols for disappeared persons that are only applied within their



Figure 5. *Being there* as a mutual act of care. I was able to enter institutions and conduct meetings in spaces that are generally out of bounds for many researchers, such as the offices of high ranking bureaucrats. I took this photo in one of the meetings I was invited at the Federal Attorney Offices in Mexico City.

LOCATEL

The first institution that was created to report lost persons, was LOCATEL.³⁶ In September 1979, LOCATEL was established in Mexico to provide support in locating missing persons. This service was widely used in 1985 when an earthquake hit Mexico City and thousands of persons were reported as “lost” or “not located”. LOCATEL is a call centre that receives reports on “lost” or “not located” persons, as well as reports on lost and abandoned vehicles and general queries from citizens. The procedure for “lost persons” reports offered by LOCATEL entails the entry of the “lost” person’s case into a database, and calls to local public hospitals and other public institutions to search for the “lost” person. Nowadays, LOCATEL continues to support the public with “lost” person

jurisdictions. In the state of Chihuahua, NGOs have long negotiated with the local government to categorise the crime of “disappearance by private entities” (i.e. disappearances carried out by organised criminals) in the local penal code.

³⁶ In Spanish, *Servicio Publico de Localizacion Telefonica*, or Public Telephone Location Services.

reports. However, due to the systematic increase in “lost” person cases and high levels of violence in the country, families who are looking for a “lost” or “not located” person now approach local prosecutors (*ministerios publicos*) and local police forces to report the absence of a family member.

High levels of violence in 2011, and the visibility of families looking for their disappeared loved ones, obliged the then President, Felipe Calderón, to create the Social Prosecution Office for Attention to Victims of Crimes (PROVICTIMA). The creation of PROVICTIMA was interpreted as the government’s response to a strong social movement, the “Movement for Peace with Justice and Dignity” (*Movimiento por la Paz con Justicia y Dignidad en Mexico*: MPJD). The MPJD was created on the 28 March 2011, after the disappearance and killing of Juan Francisco Sicilia, the son of a prominent Mexican poet and author. The disappearance of Juan Francisco in the south-central state of Morelos marked the moment that civil society noticed that this gruesome violence was not only occurring in the northern part of the country — the narrative propagated by the government and the media — but it was also affecting cities in the centre of the country and important tourist areas.

In founding PROVICTIMA, Calderón acknowledged that even though public institutions specialising in victim support existed, it was still necessary to strengthen and organise these isolated efforts to attend to the increasing amount of victims.

PROVICTIMA: Social Prosecution Office for Attention to Victims of Crimes

PROVICTIMA was established in Mexico City in October 2011 as a decentralized agency that included a Deputy Prosecution Unit for Disappeared or Non-Located Persons (*Subprocuraduría de Personas Desaparecidas o No Localizadas*), along with fourteen

local agencies.³⁷ PROVICTIMA's aim was to coordinate authorities' search strategies, and to create and run a National Database of Disappeared and Non-Located persons.³⁸ According to PROVICTIMA's official data (dating from its inauguration in 2011 until February 2013), the institution gathered information on 1,708 cases of disappeared persons in the country.

The organisation has reportedly used a 'National Protocol for the Search of Disappeared Persons' since May 2012, which helped them to locate 170 individuals. This document was part of the information I gathered from the meetings I attended with federal authorities at the invitation of families. Thanks to these meetings, acquiring this Protocol did not involve formal administrative procedures but, rather, was offered to me after I had mentioned my interest in acquainting myself with state search strategies for disappeared persons. However, when analysing the document I was given, I noticed that some parts of the Protocol were marked as "restricted". As Belcher and Martin (2013) explain, as researchers, our access to state institutions and agencies, as well as to the official documents these agencies produce, "is embedded in — and productive of — a larger discursive struggle over the boundaries of state and public knowledge about the state" (2013, p. 405). In this case, the authorities argued that giving me access to their analyses of strategies could damage their efficiency: it was, they claimed, a matter of security and provision of justice.

³⁷ PROVICTIMA local agencies were established in Chihuahua, Coahuila, Guerrero, Jalisco, Mazatlán, Michoacán, Morelos, Nayarit, Nuevo León, Tapachula, Tijuana, Tuxtla, Yucatán and Veracruz.

³⁸ Federal Official Gazette, *Diario Oficial de la Federación* D.O.F., 24 February 2012.
<http://dof.gob.mx/index.php?year=2012&month=02&day=24> (Accessed 6th December, 2016)

National Protocol for the Search of Disappeared and Non-Located Persons

The aim of the protocol was to coordinate, promote and implement actions toward the search, location and guardianship of disappeared and non-located persons. The Protocol delineated the activities to be undertaken by local prosecutor's officers and local police forces. According to this, local public prosecutors' offices (*Fiscalías y Procuradurías de los estados*) are in charge of coordinating, promoting, and implementing search strategies, as well as to keep a detailed record of the disappeared or non-located persons who might have been victims of a crime. In this sense, local public prosecutors entered the details of disappearance cases in the National Registry of Disappeared Persons — either via a “preliminary investigation” (*Averiguación previa*) or a “detailed record” of the event (*Acta circunstanciada*). They must also publicise the photo of the disappeared or non-located person via mass media using previous authorisation from the families, alert authorities at border crossings, central bus stations, ports and airports from all over the country in case there is an attempt for the disappeared person to be taken out of the country, particularly if they are underage children, and they also coordinate with local authorities specific actions for the creation of search teams. Finally, they write a report (*informe circunstanciado*) of the actions followed during the first 48 hours.

The protocol devised four stages of investigation: i) Data collection, ii) Strategic Elements for Search, iii) Search, iv) Analysis.

During the *data collection* process, the local prosecutor gathers information on the missing person via an interview which will last at least three hours. The data collected includes: general information; name, age, physical descriptions, checking email accounts, mobile phones, etc., getting passwords for all these accounts, using passport and other IDs where the fingerprint of the person might be found, photos, dental information and DNA samples. It also includes the narrative of events that led to the disappearance, the searching for notes, letters or other documents that the person might have left behind, etc.

Strategic Elements for Search: within the first 48 hours, the authority must have gathered enough information to devise a search strategy. Data on credit and debit cards, mobile phones and tablets, laptops and desktop computers, internet access, vehicles and CCTV cameras will be analysed. From this, an organised crime network will be developed and a *modus operandi* established. Within a 48-hour period from when the disappearance was reported, the authority must have established a basic scheme for different actions to be taken.

Search. Once all of this “strategic data” has been collected, a search strategy will be devised. Extensive searches will be carried out in public and private hospitals, SEMEFOs, migratory stations — Mexico has thirty-six migratory stations and twenty-three shelters all over the country, temporary detention centres, airports, ports, and support from other institutions — such as the collaboration agreements with the ICRC and its booklet on “The Missing” International Conference. Authorities must create a report on the actions taken in the first 48 hours.

Analysis. Will be done immediately after the initial data collection process. An Event and Links/Network Diagram will be devised by graphically establishing the links between entities, individuals, institutions and places. With the event diagram, the aim is to identify links or connections between events: before-during-after the disappearance.

PROVICTIMA's mandate was limited (Open Society, 2016) It was created one year before the end of Felipe Calderón's presidential term and, thus, its continuity was not secured. PROVICTIMA was established without a specific budget, so it drew funds from existing victims' offices. It was also largely staffed by members of the Federal Prosecutor's Office (*Procuraduría General de la Republica: PGR*), military and security services members, which made it difficult for victims to denounce crimes and human rights violations committed by state personnel (Open Society, 2016, p. 124; Silva Juarez, 2014).

In January 2014, when PROVICTIMA was officially dissolved, the government decided to separate out the activities under PROVICTIMA's mandate. This meant establishing an institution in charge of coordinating search efforts for cases of disappearances and non-located persons: the PGR's Specialised Unit for the Search of Disappeared Persons (*Unidad Especializada para la Búsqueda de Personas Desaparecidas, SUSDP*). Another institution was established to attend to victims and generate public policies: the Executive Commission for Attention to Victims (*Comision Ejecutiva de Atencion a Victimas: CEAV*).

CEAV: The Executive Commission for Attention to Victims

When I first arrived in Mexico City in June 2014, five months after the closure of PROVICTIMA, the families of disappeared persons were confused as to what services CEAV now provided, and which federal institution they should approach to report disappearances, and receive support — financial, psychological and juridical. In order to make sense of the new government structure, families gathered on Saturdays in a local

church to access the CEAV's new resources. Here the families would educate themselves on legal matters and the internal rules of the institution.

This institution was seen as the families' triumph, and a consequence of a "General Victims' Law" (*Ley General de Victimas*) that the MPJD negotiated with the Mexican Senate.³⁹ The CEAV was created with the object of founding an institution that could establish a first contact point with victims of crime and to offer support on these cases (broadly understood, thus, CEAV attends to cases of disappearances, human rights violations, and victims of crime, such as rape, etc.). With the knowledge generated from these interactions with victims, CEAV would be able to design public policies in regards to victims' rights.

The organic structure of CEAV was not completely clear for the families so, as well as the reading groups that were organised on Saturdays, regular visits to the CEAV headquarters in Mexico City are also organised. I was invited by families to several meetings at CEAV. During one of the meetings we had with the Director General of the 'Committee on Non-Located and Disappeared Persons', (in charge of drafting public policy and supporting victims), the officer mentioned, after continuous questioning from one of the mothers who attended the meeting, that: 'Institutions in Mexico are not prepared nor qualified to deal with disappearance cases'. To this the mother of a disappeared boy, also in attendance, replied: 'well, neither are we; the victims' relatives are not qualified to deal with disappearance cases, *we have had to learn*' (Field Notes, August, 2014). As Belcher and Martin (2013) argue in relation to different states' attitudes to openness and the concealment of information, sometimes the state and its institutions

³⁹ The General Victims' Law was approved on the 30 April 2012, and was first applied in January 2013. The law promoted the creation of a National Registry of Victims (for any crime) in order to start giving financial and medical support to victims. Even though the law was a triumph for the victims' movement, along with the creation of the CEAV, the institution has not been able to help victims of crime as the necessary legal regulations were due by August 2013, but were not published until November 2014. Additionally, the rules for registration to the National Registry of Victims were not published until February 2015, which slowed down the process of families gaining access to the support that the CEAV can provide.

cannot be characterised as “centrally malicious”, but rather understood “as an ‘adhocracy’ (Dunn, 2012) whose worst crimes are committed by mistake, incompetence and neglect” (Belcher and Martin, 2013, p. 409).⁴⁰ CEAV does still operate at my time of writing, but it has faced several challenges to its organic structure, which has affected its performance and victims’ trust in its efficacy.

PGR’s: Specialised Unit in the Search of Disappeared Persons (SUSDP)

On 21st June 2013, the government created the Specialised Unit for the Search of Disappeared Persons, which was part of the Deputy’s Prosecution Unit for Human Rights at PGR.⁴¹ Its aim was to direct, coordinate and supervise search and location investigations, and if needed, assist with the forensic identification of disappeared persons, as well as to prosecute the crimes related to these disappearances (Diario Oficial, 2013).

In July 2014, the Attorney General’s Office (PGR) and the Ministry of Interior (SEGOB), presented the progress achieved so far in the design of a ‘National Plan for the Search of Non-Located Persons’ to civilian organisations. These institutions aimed to delineate a mechanism to locate disappeared persons using a strategy of immediate search, a single registry of mass graves, and a national network of prosecutors’ offices (Open Society,

⁴⁰ According to Elizabeth C. Dunn (2012), humanitarianism claims to “govern by applying rationalizing techniques of seeing, counting, and managing”. However, humanitarian aid is “a process based as much on guesswork and rules of thumb, as it is on rational planning.” Thus, for Dunn, this situation transforms bureaucracy into “adhocracy”: a form of power that creates chaos and vulnerability as much as it creates order. (Dunn, 2012, p. 2).

⁴¹ During its period of operation from June 2013 until October 2015, the Deputy’s Prosecution Unit for Human Rights changed its director general three times. This meant there was little continuity in search strategies, case analysis and family support. During my fieldwork (2014-2015), Eliana Garcia was leading the SUSDP. During this time, me and the families’ who were participating in the CLF project were invited to a meeting at her office at the PGR headquarters; she wanted to learn more about the CLF project. During this meeting, she gave us a presentation detailing her work and milestones in regards to the search for disappeared persons in the country. However, from the very beginning, Eliana made clear that she was not fond of the idea of families’ collecting their own DNA samples, and, later, she openly opposed the CLF project by asking family members from Ayotzinapa not to collaborate with us.

2016, p. 122). The creation of the SUSDP was presented as a milestone of this National Plan. Additionally, the Ministry of the Interior and the PGR announced the creation of four disappearance working groups on legislative harmonisation, the implementation of information technologies, building forensic capacity and supporting and managing information for families.

As part of the working group on building forensic capacity in the country, the PGR signed a collaboration agreement with the International Committee of the Red Cross (ICRC) on October 2013.⁴² This agreement gave the PGR access to the ICRC's Ante-Mortem and Post-Mortem (AM/PM) Database, a forensic database developed by the international organisation for the identification of missing persons as consequence of wars.⁴³ In the national media, there was frequent speculation regarding how the implementation of this database at a national level would help in the *search, location* and identification of disappeared and not located persons.⁴⁴ However, by looking at the objectives stated by the ICRC's Brief Report on the Database, it was clear that the AM/PM Database was a tool to facilitate the identification process by *storing* and *managing* information on missing persons (ante mortem data), which then can be matched with information from unidentified bodies and body parts recovered from different sites (post-mortem data) via "automated basic matching".⁴⁵ Hence, there was no reference to the capacity of the AM/PM software to design a search strategy for disappeared persons, as it was already being publicly discussed by federal authorities and media.

⁴² International Committee of the Red Cross (ICRC) <https://www.icrc.org/spa/resources/documents/news-release/2013/02-21-mexico-ihl-missing-segob.htm> (Accessed, March 2016).

⁴³ The ICRC uses the term AMPM to mean the Ante-Mortem and Post-Mortem Database, however, for the sake of clarity, I have added a '/' to the term: AM/PM.

⁴⁴ Field notes January, 2015. See also: <http://www.reforma.com/aplicacioneslibre/articulo/default.aspx?id=364421&md5=c9f9805eb582501a03839b87594a535a&ta=0dfdbac11765226904c16cb9ad1b2efe> (Date Accessed March, 2017)

⁴⁵ According to the ICRC Brief Report, the AM/PM: "The Database facilitates the identification process by supporting the archiving, standardization, reporting, searching, and analysis of forensic data, as well as the automated basic matching of AM and PM data. It also provides and promotes best practices for data management and the use of appropriate methods" (ICRC, 2013, p. 2).

ICRC, International Committee of the Red Cross: the AM/PM database

As defined in its mandate, the ICRC is a strictly humanitarian organisation. The ICRC is a neutral, impartial and independent humanitarian institution, which provides protection and assistance to victims of armed conflicts and internal violence. When I visited their headquarters in Mexico City, I was immediately handed a booklet called ‘The Missing Conference 2002’ by members of the Mexican ICRC delegation. This was a *memoir* from the conference and workshops that had been held with a range of international forensic experts in order to come to a common understanding of the best practices for dealing with the problem of missing persons. As a consequence of ‘The Missing Conference’, in 2008 the ICRC developed the Ante-Mortem and Post-Mortem (AM/PM) database to “compile, manage, centralize and process files on missing persons and unidentified remains effectively” (ICRC, 2013, p. 2). By 2014, the AM/PM Database was being used by approximately 50 institutions worldwide, including national information bureaus and non-governmental organisations. The Database software is provided free of charge, and is the result of collaborative work between forensic organisations and experts throughout the world.⁴⁶

The AM/PM database is an electronic tool that gathers information on missing persons and unidentified bodies and body parts across six modules (ICRC, 2013): *Missing Persons (Ante-Mortem Data)* — personal, physical, medical and dental information, as well as details of the circumstances of their disappearance, and DNA data; *Sites, Recovery Points and Deposits* —which includes all field data related to the location and recovery of remains; *Post-Mortem Cases (Human Remains)* — detailed pathology,

⁴⁶ According to the ICRC the idea of creating an AMP/M Database was discussed and developed following the International Conference on the Missing and their Families organised by the ICRC in 2002. The AM/PM Database “is an electronic tool for the management of information on missing persons and human remains. It manages information about missing persons and the events related to their disappearances, as well as recovered bodies (or body parts) and the sites where they were found. The AMPM Database is highly configurable for use in a large variety of contexts” (ICRC, 2013, p. 2).

anthropology and odontology data, and DNA Data; *Events*— which allows information between missing persons to be linked, details of sites and post mortem cases; *Witness Statements*—interviews and media articles or investigative documents; *Identification*— this module makes it possible to track hypotheses and confirmations of identity or exclusions; and *Case Management*— which makes it possible to track all actions taken in specific cases.

The ICRC's delegation started its work in Mexico in 2011.⁴⁷ The ICRC has been particularly interested in the transnational problem of migrants disappearing while crossing from South America to Mexico, as well as migrants disappearing along the northern border of Mexico while trying to reach the U.S. Thus, the ICRC provides support not only to Mexican families but to Central and South American families who are looking for their loved ones in Mexico. Additionally, the ICRC provides forensic support to the Mexican government, mainly through workshops, training forensic specialists and by providing technical assistance in four specific areas: forensics and legal advice, data administration and psychosocial support.⁴⁸

The Mexican government worked alongside the ICRC and international forensic experts, including the EAAF, to adapt the AM/PM software for use within the Mexican context.⁴⁹ Since October 2013, the ICRC and the PGR have been working in collaboration to implement the AM/PM Database in Mexico. One year later, in October 2014, six states (of Mexico's 32) had signed agreements with the PGR and ICRC for the local implementation of the database.⁵⁰ However, to sign an agreement does not necessarily mean that the database is being used/implemented.

⁴⁷ Following the tradition of crossing national borders to provide forensic assistance, the ICRC delegation in Mexico was made of Colombian and Spanish forensic experts.

⁴⁸ Meeting with ICRC, Field Notes, January 2015.

⁴⁹ Email exchange with Eliana García (PGR) in October 2, 2014; Field Notes January, 2015.

⁵⁰ Veracruz, Puebla, Tlaxcala, Estado de Mexico and Mexico City.

The PGR aimed to train staff to conduct ante-mortem interviews in 2014. By October 2014, the PGR had already trained 60 individuals in the process of data collection (interviews with family members) and inputting information into the database. According to Eliana Garcia, in 2015, the PGR wanted to extend this training at a national level.⁵¹

I first encountered the AM/PM database in September 2014, first during a meeting with families of disappeared persons in Mexico City and, then in one of the informal chats I had with Graciela, the mother of Milynally, late into the evening in a coffee shop near the PGR's offices in Mexico City.⁵² Graciela had spent the day at the PGR filing the cases of her four disappeared relatives. Graciela arrived with a bunch of papers, approximately 240 printed pages. These "pages" were a hard copy version of the ICRC's ante-mortem questionnaire, which was meant to be completed by the aforementioned staff that the PGR and the ICRC had been training. However, Graciela was told to go home and complete the questionnaire by herself. She needed one questionnaire for each person/family member she was looking for, which meant she needed to complete approximately 240 pages of documents. Graciela looked at me and said: "This is re-victimisation, I cannot believe they [the authorities] are doing this."⁵³

Mexico City was one of the states that pioneered the application and establishment of the AM/PM Database. One of the institutions receiving the software was the Identification Unit at the National Institute of Forensic Science (INCIFO). However, long before the AM/PM software was developed, the Identification Unit developed an index card that allowed them to collect ante-mortem data that could be useful during identification

⁵¹ Eliana Garcia left her position as Deputy's Prosecution Unit for Human Rights in May 2015.

⁵² Graciela Pérez is from Tamuin, San Luis Potosí. On the 14 August, 2012 her thirteen-year-old daughter, Milynally Piña Pérez, disappeared on the stretch of highway between Tamaulipas de Xico and Ciudad Mante in the northern state of Tamaulipas. She was returning home after a short holiday in the U.S. with her two cousins and her uncle: Alexis Domínguez Pérez, 16 years old; José Arturo Domínguez Pérez, 20 years old; and Aldo de Jesús Pérez Salazar. Since then, Graciela has been looking for them. More information on this case: http://www.geografiadeldolor.com/espacio/san_luis_potosi/ (Date Accessed: November 2015).

⁵³ Cruz-Santiago, Field Notes; Cruz-Santiago, Diary Entry, October 2014.

processes. The index card system was designed by two longstanding members of the Identification Unit Team. According to the designers of the system, the index card — though assumed to be a humble, handwritten technology — had allowed them to keep accurate forensic records of the bodies that had arrived to its amphitheatre to be analysed, dating from the early 1980s. Since December 2014, INCIFO have been collecting data using the printed version of the AM/PM database. But, data searches are still done “by hand”.⁵⁴ Now, they have been asked to transfer this information to the ICRC’s software so that identifications and “matches” between AM and PM data might be carried out in just a couple of hours. However, the INCIFO had to, first, get computers and appropriate hardware to set up the AM/PM Database. INCIFO holds a vast amount of data on 13,000 unidentified bodies, and it took approximately a month to upload twenty cases into the database (Jimenez, 2014).

In April 2015, the ICRC and PGR, signed an agreement for the creation of a ‘Standardised Protocol for the Location of Disappeared Persons’. However, in October 2015, due to limited human resources, and a 63% decrease in budget, authorised by President Enrique Peña Nieto in 2014, the Specialised Unit in the Search of Disappeared Persons (SUSDP) became unsustainable, and it was replaced by the Special Prosecution Office for the Search of Disappeared Persons (SPOSDP) (Open Society, 2016).

SPOSDP: The Special Prosecution Office for the Search of Disappeared Persons

On the 9 October 2015, the PGR laid out guidelines for the creation of a Special Prosecution Office for the Search of Disappeared Persons. This Office is part of the PGR

⁵⁴ Cruz-Santiago, Field Notes; INCIFO, May 2015.

and is thought to be dealing with the country's disappearance cases. The aim of the SPOSDP is to search for and locate disappeared persons, prosecute crimes, and if necessary, carry out forensic identifications (Diario Oficial, 2015). As of October 2015, SPOSDP had 846 case files under investigation, which were passed on from the previous administration. At the time of writing this thesis, the specific regulations, and design of the Special Prosecutor's Office are still being negotiated, and have not yet been properly established. Furthermore, to date there is no established search protocol designed for the location of disappeared persons. Discussions within civil society have long emphasised the need for a National Search Protocol that takes into account the specificities of disappearance cases and is structured around the immediate search for disappeared persons (within the first 72 hours), while continuing to actively search for those who have been disappeared for more than two years. In addition, it has been suggested that this protocol should develop different search strategies for disappeared persons that are believed to still be alive, and those who are believed to have been murdered.⁵⁵

As I have shown, the strategies and protocols for searching for the disappeared are still being developed at the federal level, and there are disparities between local and federal authorities that have made it very difficult to coordinate efforts to search and locate disappeared persons. Moreover, the disappearance patterns that I observed during my fieldwork showed that most disappearances took place outside the victim's normal place of residence and, usually, while the disappeared person was in transit. This complicates how investigative methodology could be applied to these cases, since it necessitates coordination between local and federal institutions.

⁵⁵ Cruz-Santiago, Field Notes, visit to SERAPAZ, August 2014.

INCIFO: National Institute of Forensic Science

“If you want to know about forensic identification you have to read this...” So I was told the first time I arrived at INCIFO, and then I was handed a printed copy of the ‘Forensic Investigation Protocol for cases of suspicious or non-natural deaths believed to be produced by human rights violations’ (*Protocolo Modelo para la Investigacion Forense de Muertes Sospechosas de haberse producido por Violacion de los Derechos Humanos*). This document was part of the first stage of the Technical Cooperation Programme for Mexico, designed in May 2001 by the Argentinean Team of Forensic Anthropologists (EAAF) and Maria Cristina de Mendonça, from the National Institute of Legal Medicine in Portugal. The Protocol contained the steps to follow in order to identify bodies or human remains, and to collect information that can be used to prove the perpetration of systematic violations of human rights (Field notes October, 2014). The same day, I was invited by a member of the Identification Unit to attend lectures given at INCIFO for undergraduate students as an optional module for odontology and criminology students. On a couple of occasions I also attended lectures for postgraduate students in Forensic Odontology. During a three-month period (May–July, 2015) I spent one or two days a week at INCIFO, with classes varying between “lectures” and “practical days”, with an early start at 7am. My time at this institution, though brief, offered me an excellent space to learn more about the forensic identification techniques used in Mexico, enabled me to visit the amphitheatre and to see how forensic expertise is enacted, in what, for many of my interviewees, was seen as the most advanced, well-funded and professional of all of the mortuaries that they had visited or come into contact with.

Epilogue: It could have been me, or the nearness of disappearance

While conducting research before I embarked on my fieldwork, I read international agency reports on the status of disappearances in the country, newspaper articles related to cases of disappearance, and I re-listened to interviews from previous research that I carried out in Mexico in the summer of 2013 for my MSc dissertation. All of this gave me an “outside” perspective on “disappearances” in Mexico. The stories were, more or less, the same: disappearances due to violence in the northern part of the country affecting mainly disadvantaged communities, and accounts of the lack of street lighting, deserted areas near the border with the U.S., or, simply, people who were in the wrong place at the wrong time. However, when I arrived to Mexico and started conducting interviews, I was exposed to the intricate details of disappearances, and I got to know new cases that were not as “famous” or well publicised as those that I had read about. One such case was Alejandro Moreno Baca’s. When I first met his parents at a restaurant in a privileged area of Mexico City, I felt as if I could be meeting my own distant family members. They did not fit the characteristics or the narrative presented by the media or the government’s narrative. Through our conversation it emerged that they lived in the same neighbourhood in which I had spent most of my life. We went to the same supermarket, shopped for clothes in the same mall, went to the same cinema, and their sons went to nearby primary schools.

When I got home I could not help but think that what happened to Alejandro could have happened to my brother, and that my parents could be the ones searching for him. It could have been me.

Concluding Remarks

In this chapter, I explained the methods used to undertake this research. I have reflected not only on the difficulties of conducting fieldwork in what is sometimes perceived as a dangerous space, but also on the complexities and vulnerabilities created by long-term commitments in the “field”. I described the spaces and forensic institutions I visited, and how I gained access to them. I have reflected on my privileged role as doctoral researcher and Co-Investigator, and how these roles shaped my investigation. I have emphasised how being in the “field” is much more than just *being* there and entails a lot of “mindwork” (Wolcott, 1995), and reflexivity is needed from the researcher.

Tim Ingold (2010) has written on the relation between becoming knowledgeable, walking along, and the meaning of ground, specifically in terms of how the ground is apprehended in movement rather than from fixed points. Ingold analyses wayfaring practices and the role of the wayfarer: the pedestrian. The wayfarer, is blind. Not because he cannot see anything in the field of vision, but because he cannot see either in his mind’s eye, or, on the ground, the overall pattern or design traced by his movement. The pedestrian’s eyes are simply too close to the ground. In this sense, the efforts to search and “dismantl[e] the soil and inspect the ground”, have sometimes left the wayfarer without the ability to see the path he has traced, or to observe the knowledge-growing process that he has followed by moving and walking along. In order to see their designs, Ingold argues, “he would have to fly with the birds, as in some societies shamans are reputed to do” (Ingold 2010, p. 127) Writing this study has been an intellectual as much as a journey of emotional self-discovery. As Tim Ingold describes, it is only when the wayfarer is able to fly with the birds, when s/he can be aware of the journey and the path s/he has created. This thesis is just that: My very first shamanic flight.

Interlude I

Body Counts⁵⁶

I cannot remember the first time that I heard about disappearances in Mexico. But I clearly remember the first time that I heard about the efforts of families to locate their missing persons. This was four years ago, in February 2012, while I was living in Colombia. Somehow, being away made me more aware and more interested in the socio-political situation of my home country. I used to listen to Carmen Aristegui's radio programme every morning, an influential Mexican anchor-woman, famous for her analytical and investigative journalism⁵⁷. During her programme on the 15 February 2012, Aristegui interviewed Mr. Castillo, the father of Carolina, a fifteen-year-old girl who disappeared in 2009 from the city centre of Ciudad Juárez, Chihuahua, while walking to school. After a dismissive response from their local authorities (who, it transpired, were negligent in their duties throughout), her family decided to start their own search. According to their investigations, Carolina may well have been abducted and taken 1,800 kilometres south to the State of Mexico, where she was sexually trafficked. In order to pay for his travel expenses to the State of Mexico, Mr Castillo started selling hamburgers in Ciudad Juárez city centre, in the same spot where his daughter was last seen. I could not believe that this kind of situation was even possible. How could a poor family be left with no choice but to gather money to search for their own daughter? I remember reading about femicides in Mexico quite a long time ago. There was even a

⁵⁶ Tabulating missing persons and creating independent registries of civilian deaths, has established itself as a practice needed for accountability efforts. On the importance of independent records of civilian deaths see 'Iraq Body Count', a non-profit initiative to verify reported deaths in Iraq as a result of the violence of the occupation. The information collected relies on secondary sources from reputable media. <https://www.iraqbodycount.org/> (Accessed: 15 September, 2016). In the case of the former Yugoslavia, the increased focus on counting the Srebrenica victims, which some agencies have calculated at 8,000 Bosnian Muslim men and boys, has led other ethno-national groups to compile their own (Smith and Wagner, 2007, p. 35).

⁵⁷ On November 2016, Carmen Aristegui was chosen by the BBC as one of the most influential Mexican journalists in history who has put some of the most powerful people in her country on the spot. More Information available at: <http://www.bbc.co.uk/news/world-38012048> (Accessed: December 2016).

Hollywood movie starring Jennifer Lopez, playing the role of a journalist who investigated the femicides. But they seemed to be happening ‘over there’, in the socially and economically deprived areas near the border with the United States, and far away from my comfortable middle class neighbourhood in Mexico City. All of a sudden, listening to Mr. Castillo made everything feel more real: *closer*.

Two months later, in April 2012, I volunteered for an independent counting exercise called Fewer Days Here (*Menos Dias Aquí*)⁵⁸. Initially, the task appeared to be relatively straightforward: for seven days I visited the webpages of several newspapers located across the country in order to collage information from homicide reports or news of violent killings that had taken place in that week, and I gathered as much information as possible regarding the victims. The data collected included age, gender, the clothes they were wearing at the time, and identifying characteristics such as moles, tattoos, etc. During my seven days carrying out this project, I counted more than 280 individuals who had been violently killed. There were cases of crossfires between police officers and gang members, dismembered bodies appearing inside plastic bags in city centres, children who were killed outside their houses while playing football, and drug related incidents that involved the murder of young boys, with their bodies found along highways.

During my participation on this project, my mentor at *Menos Dias Aquí* sent me regular emails monitoring my wellbeing. She knew that this would be an emotionally draining experience and wanted to know how I was coping with its pressures. But, aside from feeling a little disconcerted by the material that I was reading (usually near midnight, when I had the time to invest two to three hours to collect the data), I initially remained composed. I was surprised, though, to find that I was only able to gather limited

⁵⁸ This project is organised by the association ‘Our Apparent Surrender’ (*Nuestra Aparente Rendición*), and it is intended as a way of remembering and honouring the victims of the violence in the country, whilst at the same time creating the possibility of generating statistical insights into violence patterns (Ruse, 2015). For more information visit: <http://nuestraaparenterendicion.com/index.php/estamos-haciendo/menos-dias-aqui> (Accessed: 17 September, 2016).

information on each victim, with articles containing few details that might aid their identification. Each description read almost identically: “Male, early 20s, dark skinned, brown hair and eyes, wearing jeans, short sleeved t-shirt and trainers”. With such descriptions, the victim could have been anyone: my brother, my friends from university, or my cousins.

A couple of weeks after I finished my participation with *Menos Dias Aquí*, I started feeling depressed: I was sad and lacking in energy, for no apparent reason. Then I cried for days, two or three, it seemed. I could not find the reason for my sadness. Until I realised that I was crying for *them*, for the 285 persons whose deaths I had been counting⁵⁹.

⁵⁹ Reflections from the field: Based on field-diary entries (July-August 2016) and personal memories.

Chapter Four: Disappearances and Forensic Expertise in Mexico

Most analyses of recent disappearances in Mexico have framed this problem as part of the so-called ‘War on Drugs’ emphasising a male narrative on the violence inflicted in young men, or by making reference to the enforced disappearances that have occurred in Mexico and all over Latin America since 1960 and continue to occur nowadays. However, I decided to begin the analysis of this thesis with a focused investigation on the disappearances of women in the Northern state of Chihuahua to recover a set of violences otherwise forgotten. This decision was based, firstly, on feminist and STS grounds for alternative modes of knowledge production that are at once embodied and political and that tend to be forgotten or invisibilised. Secondly, because the continuous disappearances and killings of women in the Northern part of the country can be framed in the uneven development that redefine the modern state space in Mexico particularly in the latter half of the 20th century (Morton 2012).

As Adam Morton (2012, p. 1637 – 8) argues, the state of Chihuahua experienced the spatial mobility of transnational production in the form of *maquiladora* industries who were established in the border with the United States. The creation of *maquiladoras* was part of the re-scaling of capital accumulation processes introduced by the North American Free Trade Agreement (NAFTA), which radically changed the urban system in Mexico consolidating Northern states like Chihuahua and Nuevo Leon as industrialised centres. The advent of *maquiladoras* and the increased need for cheap manual labour brought to the area a population of young families and women arriving from rural areas and small towns across Mexico. The vulnerabilities imposed to this population by neoliberal

practices of labour and the lack of public services in the area, sought an increase in the number of crimes reported, especially those committed against young women and girls.

Consequently, during the 1990s in Chihuahua, the grounds were set for alternative citizen-led practices of forensic knowledge production to prosper. Families who lost their daughters to violence, after facing the state's dismissal of the problem, decided to patrol desert areas, and carried out their own searches in order to find their daughters. .

Thirdly, while conducting one year of fieldwork in Mexico in 2014–2015, a number of important considerations came to light during conversations with mothers-NGO leaders from Chihuahua who are central to this thesis. Crucially, interviewees mentioned a transition they had witnessed from the disappearances occurring in the late 1990s to the more recent wave of disappearances and violence experienced from, approximately, 2006 when former President Felipe Calderon declared the 'War on Drugs'. Since then, local families started denouncing not only women's disappearances but also the disappearance of teenage boys and young men in the area. Finally, feminist readings of these disappearances, such as the work of Melissa W. Wright (2016) in 'Epistemological Ignorances and Fighting for the Disappeared: Lessons from Mexico', inspired my approach to this chapter.

Feminicidios: Disappearances in the northern part of the country, 1990 – 2000s

The state of Chihuahua in the northern part of Mexico is the largest in the country. With an area of 247,455 square kilometres (95,543 square miles—slightly larger than the UK)⁶⁰ and 67 municipalities, it accounts for 12.62% of Mexico's territory. To the north Chihuahua shares a long border with the United States, specifically with the states of New Mexico and Texas.

The most heavily populated municipality in Chihuahua is the border city of Ciudad Juárez with 1,391,180 inhabitants (INEGI, 2015). Ciudad Juárez is located in the desert on the U.S.-Mexico border, across from El Paso, Texas. Its strategic location has enabled the city to undergo significant economic and industrial developments, particularly since the early 1970s, when Mexico adopted the Border Industrialization Program (BIP).

Officially announced by the Mexican government in May 1965, the BIP was part of a government strategy to attract U.S. industry to its northern border where imported components are assembled for export (Ericson, 1970, p. 33). Included among the benefits offered by the Mexican government was a plentiful supply of cheap labour, the waiving of duties and regulations on the importation of machinery, equipment and raw materials for the plants, as well as waiving restrictions on foreign capital, as long as the end products (mainly assemblies of U.S. made components) were exported. (Ericson, 1970, p. 33; Dillman, 1976; South, 1990; Amnesty International, 2003). In January 1970, four years after the implementation of the BIP, “the Mexican government had approved about 160 American owned enterprises, and approximately 20,000 jobs had been created” (Ericson, 1970, pp. 34-35). By 1974, 550 assembly plants belonging primarily to U.S.

⁶⁰ The United Kingdom is 243,305 square km, according to The Commonwealth Member Countries website: <http://thecommonwealth.org/our-member-countries/united-kingdom>, accessed on 27th September, 2016.

based firms were located along Mexico's northern border communities (Dillman, 1976, p. 138) and in 1988, the number of manufacturers in the area ascended to approximately 1400 (South, 1990, p. 549). These assembly plants are called *maquiladoras*⁶¹.

Maquiladoras are assembly manufacturers in Mexico that employ semiskilled or unskilled labour and whose products are primarily destined for export markets. These factories are subsidiaries of foreign companies and they operate with imported raw materials, and re-export all of their finished products to their countries of origin (South, 1990, p. 540; IACHR, 2006). According to Stoddard (1987) "the term *maquila* generally refers to the process of production...whereas the plants are called *maquiladoras*" (Stoddard, 1987, p. 1 in South 1990, p. 567, my emphases). Both terms are used interchangeably throughout the border area and in related literature.

Before the BIP began, the Mexican government devised a strategy to improve infrastructures and provide physical improvements needed in the border cities via the National Border Program (*Programa Nacional Fronterizo*: PRONAF). PRONAF sought to provide the area with the necessary services for industrial and commercial development: land reform, paved roads, public lighting, water, and new urban infrastructure (Ericson, 1970, p. 33). These enhancements created a steady stream of internal migration to the border cities from rural areas of Mexico, with migrants attracted to the prospect of working in a region with higher standards of living, and at close proximity to the U.S. (Dillman, 1970, p. 138).⁶² These internal migratory movements have intensified since 1994, when the North American Free Trade Agreement (NAFTA)

⁶¹ *Maquiladora* is derived from the Spanish verb *maquilar*, which means a miller's toll, a charge that millers collect for processing grain. During the colonial period, the *maquila* was the portion of grain or flour retained as payment. The parallel for current usage is that Mexican plants provide labour services, never owning the components or final products (Goddard 1985, p. 157; South, 1990, p. 567)

⁶² According to Dillman (1976, p. 138) "The population in the border zone municipalities swelled from 841,000 in 1950 to 2,335,000 in 1970 at a mean annual rate of 5.2%, compared with 3.2% for all of Mexico and 3.6% for the six northern border states. In 1970, 15.3% of Mexico's inhabitants did not reside in the state of their birth; this was true for 20% of the population in the northern border states and for 29% of the inhabitants of the border strip".

was signed between Mexico, the U.S. and Canada. This agreement boosted the formation of regional production-sharing arrangements, particularly between Mexico and the U.S., and induced not only more intra-industry, but also intra-firm trade between these countries. This resulted in the stronger economic integration of the U.S. and Mexico via manufacturing sectors (Ramos-Francia and Chiquiar, 2005; Cañas, *et.al.*, 2013).

The strengthening of this manufacturing sector was promoted in Ciudad Juárez through the concept of twin cities. As part of this new era, Ciudad Juárez became an industrialised area that promised to bring modernity, jobs, and wealth to the region. With a growing migrant population and a developing industry, “the social and urban polarization resulted in a city of stark contrasts” (Amnesty International, 2003, p. 24) According to official figures, more than half of the population of the Municipality of Ciudad Juárez consists of people from other areas of the country or foreigners (IACHR, 2003, paragraph 38). This population shaped their own spaces in disadvantaged areas of the city, where a lack of public services, security, and housing created vulnerabilities for the incoming population of mostly young families, arriving from rural areas and small towns across Mexico (Amnesty International, 2003, p. 24).

Since then, Ciudad Juárez has been characterised by rising levels of crime rates, concerning both women and men. However, 1993 was the first year that marked an increasing number of homicides against women. Even though official records of the number of homicides against women are either non-existent or inadequate, a study carried out by Amnesty International (2003) shows that the killings of women in Ciudad Juárez quadrupled, while male killings increased threefold, in the ten year period analysed from

1993 to 2003. Further, this study shows that of over 370 women murdered, at least 139 of them were sexually assaulted.⁶³

Due to the lack of due diligence in the investigation of these crimes, there is no information regarding the motivation behind these homicides. However, a substantial number of cases are linked to sexual violence with gendered causes, with others linked to domestic and interfamilial violence (IACHR, 2003, paragraph 43; Amnesty International, 2003). According to Articles 1 and 2 of the Inter-American Convention on the Prevention, Punishment and Eradication of Violence Against Women, 'Convention of Belem do Para', which Mexico ratified in 1998: "violence against women shall be understood as any act or conduct, based on gender, which causes death or physical, sexual or psychological harm or suffering to women, whether in the public or the private sphere" (IACHR, 1994). Further, it emphasises that

...violence against women shall be understood to include physical, sexual and psychological violence that occurs within the family or domestic unit [...] a) that occurs in the community and is perpetrated by any person, including, among others, rape, sexual abuse, torture, trafficking in persons, forced prostitution, kidnapping, and sexual harassment in the workplace, as well as in educational institutions, health facilities or any other place; and b) that is perpetrated or condoned by the state or its agents regardless of where it occurs. (IACHR, 1994).

This convention also codifies the obligation of the state to ensure that human rights are exercised in the prevention, investigation, punishment, and eradication of violence against women, and to adopt all appropriate legal and administrative measures without delay.⁶⁴ Gender-based violence in Ciudad Juárez became self-evident when mutilated female bodies and human remains were found along the edges of the city, desert areas,

⁶³ Amnesty International developed its own database by cross-referencing information obtained from official, non-governmental, legal and academic sources (Amnesty International, 2003, Appendix).

⁶⁴ Inter-American Convention on the Prevention, Punishment and Eradication of Violence against Women "Convention of Belem Do Para", Article 7.

and along rivers. A significant number of these victims were beaten and subjected to sexual violence before being strangled or stabbed to death (IACHR, 2003).⁶⁵ The circumstances in which these women were killed raise multiple concerns, focussing attention on local security institutions, and highlighting the state government's responsibility to protect victims, investigate these crimes, and to prosecute those who are responsible.

According to a report by Amnesty International that pooled information collected from local NGOs, by 2003 homicide statistics in Ciudad Juárez showed that more than half of the reported victims were now women and girls aged between 13 and 22 years, although at least one case involved an 11-year-old girl (Amnesty International 2003, p. 27). Two thirds of the victims were from low income households and were either students, informal commerce employees, or women that had been forced into a combination of prostitution and drug trafficking, with no other option but to travel alone on the long bus journeys that took them from the suburbs surrounding Ciudad Juárez, to their place of work, study or leisure. Furthermore, some of these girls worked in *maquilas* and disappeared shortly after leaving work (Amnesty International, 2003; 2005).

As these crimes became more prevalent, local authorities began to employ the familiar discourse that the victims themselves were to blame for their own disappearances or murders, and refused to acknowledge that this violence was out of the ordinary (Amnesty International, 2003). As Arturo Gonzalez Rascon, Chihuahua's former State Public Prosecutor, publicly declared in 1999: "Women who have a night life, who go out late at

⁶⁵ Sexual violence encompasses "not only rape but also all other acts that constitute attacks against sexual freedom and dignity but which fall short of rape. For example, the fact that a murder victim has been found naked or semi-naked although there are no signs of rape has been deemed to be an act of violence or sexual abuse in itself" (Amnesty International, 2003, p. 27, footnote 20).

night and come into contact with drinkers, are at risk. It's hard to go out on the street when it's raining and not get wet" (Amnesty International, 2003, p. 9).⁶⁶

As this statement shows, local authorities justified the deaths and disappearances of women in the region by "resorting to the discourse of the public [woman], the age-old story of the prostitute who not only wreaks social destruction but who also deserves her own violent destruction" (Wright, 2016, p. 8). These public discourses were accompanied by the authorities' disinterest in systematizing information on the cases reported, or in creating an effective record of data that could facilitate investigations, locate the missing women, and punish those responsible. These authorities also refused to open a formal criminal investigation to determine whether any criminal offences, such as a kidnapping, had taken place, and thus disregarded the pattern of disappearances and murders of women in the region (Amnesty International, 2003).

As Norma—the mother of a young woman who had disappeared—explained to me during an interview:

We went to the authority and opened a report for the disappearance [of my daughter], but 'to disappear' is not a crime; in the law it is not considered a crime, so they filed a report, but is never considered a crime... So they would not assign police officers to the case until 72hrs had passed since the time of disappearance [...]

As soon as I got there [to the police station] they told me 'Look Mrs., your daughter must have ran away with her boyfriend, you'll have to wait at least 72hrs, is that clear?' (Interview with Norma Ledezma, September 2014).

Similar experiences were consistently shared with me in further interviews with the relatives of disappeared persons while conducting the fieldwork for this study in Mexico City during 2014-2015. Authorities regularly refused to act on a missing person's report

⁶⁶ Quote taken from Amnesty International report on Mexico. Developments as of September 2003.

until several days had passed, justifying the delays on the grounds that the missing person might have gone off with their boyfriend without informing her family and friends, or was involved in some illicit activities and had decided to run away (Amnesty International, 2003, p. 32; Cruz-Santiago fieldwork notes 2014-2015). In missing person cases, authorities record the information provided by families in the form of reports. Any statements made by the families for these reports are not treated as formal criminal inquiries, which would then trigger police intervention, because a missing person report is seen simply as an administrative resource.

In 2000, the Chihuahua state prosecutor's office in Ciudad Juárez developed the concept of "high risk" missing persons cases based on whether or not, prior to going missing, the person had a stable routine or had showed any desire to leave home. According to data from March 2003 (Amnesty International 2003, p. 32), of a total of 69 missing person cases, only one was considered by the authorities to be "high risk". Authorities rely on assumptions of the 'good' or 'bad' behaviour of the girls, or assessments of their relationships with their family members before deciding on a classification for each case. Indeed, the concept of a risk score implies differential responses to what had become an almost routine exposure of young women to acts of violence. Even if a case should be determined to be "high risk", this does not mean that it should necessarily be dealt with differently from a legal standpoint, since, even then, there is no presumption that the person has gone missing as part of criminal activity, and therefore no criminal investigation needs to be opened (Amnesty International, 2003, p. 32).

Although it should be the duty of the state to establish whether the missing person was the victim of a crime, the authorities, in dereliction of their duties, have relied on families reporting incidents, giving them the task of determining whether the missing person had left voluntarily or not. In several cases, families reported that their local authority had discouraged them from setting up a criminal report, by warning them of the potentially

dangerous consequences, such as death threats, or further harassment directed at the family:

We arrived to this building, we thought... I mean, we went there, to what we thought were the General Attorney Offices [in Mexico City] to report the crime [of their son's disappearance], we didn't know anything about setting up a 'detailed record' [*acta circunstanciada*] of the event, or what was a 'preliminary investigation' [*averiguación previa*]. We had never been aware of what it meant to report a crime, so we went to this building that is beside SEIDO,⁶⁷ because we thought that was the *Subprocuraduría* where you could report a crime ... there was no parking space so my husband went alone, he took a long time to come back to the car where I was waiting for him, but then when he finally arrived I asked: -'How did it go?'

- 'I couldn't report the crime'

- 'Why?!!

- 'When I was about to report the crime, the public prosecutor asked me: are you aware of all the reprisals that you and your family may receive as a consequence of filing this report? As soon as tomorrow you could start receiving calls from the criminals ...

My husband got scared and decided not to report the crime... On our way back home I said to him, 'you know what? Fear is not going to stop us. We need to report it'. And that's what we did.

Soon after that day, we found out that the offices where we were reporting the crime were those of the Assistant Attorney General for Human Rights. A Human Rights Office!! (Interview with Lucia, 2014)

Lucia could not believe that within a Human Rights Office authorities were discouraging people from reporting a human rights violation. She and her family were made more aware of their potential exposure to threats from organised criminals than they were appraised of the support that they could receive from the Human Rights Office. The state authorities' unwillingness to deal with missing persons reports, and to offer help to

⁶⁷ SEIDO is the Deputy Attorney's Office Specialized in the Investigation of Organized Crime. *Subprocuraduría Especializada en investigación de Delincuencia Organizada*, SEIDO.

affected families, along with their failure to prosecuting the perpetrators of women's disappearances and killings, have caused deep distrust among civil society.

Thus, a series of public demonstrations held by families in Chihuahua were organised to show that the missing girls were young women with dreams and aspirations, who were, for instance, studying in the evenings or at weekends after going to work, and who wanted to succeed in their studies and family lives— some as young as 17 were already mothers and supporting households. The attempts of these families to dignify their missing relatives contrasted with the discourse put forward by the political and economic leaders of the region that has long maintained that the missing girls and women were not 'good' or 'well behaved', and that their tortured bodies, found at the edges of the city showed the consequences of being surrounded by 'bad' people (Amnesty International, 2003; Norma Ledezma Interview, September 2014; Wright, 2016).

As Norma explained to me:

[...] We heard these stories in the early 90s that in [Ciudad] Juárez young girls disappeared [*se desaparecían*], women...and no-one would find them or they were found dead after a long time, but some of them were never found [...] the government, through their control of the newspapers and monopoly of the mass-media, used to inform us, and continuously let us know that these types of women, the ones who disappeared was because, as they used to say, they had a 'double life'... during the day they would be housewives or workers at *maquiladoras*, but at night they would associate with people in pubs and night clubs, they would go out to dance ... [they would spend time] with criminals, and this made them vulnerable, they were in a position of... this is why they disappeared, right? That was the authorities' explanation, so we believed them, the society believed them... (Interview with Norma Ledezma, September 2014).

Norma's statement exemplifies how the state and the media continuously criminalised the disappeared by questioning their daily routines and personal relationship choices. This public criminalisation served as a deterrent, with families then deciding not to contact the

police immediately. Further, as Melissa W. Wright argues, for local authorities, these “public women” were not matters of public concern, but rather the private responsibility of families who needed to control their wayward and over-sexualized female relatives. “These women represented crises of patriarchy, not crises of the state”, Wright suggests, and, as such, their deaths and disappearances were, “private, not public, matters” (Wright, 2016, p. 8).

In 1993, in an attempt to make these deaths a matter of public concern, a group of mothers who were looking for their missing daughters arranged a meeting with the mayor of Ciudad Juárez in order to raise their concerns about women’s safety in the area (Wright, 2016). Esther Chavez Cano was member of this group. At the time, Esther was a retired accountant who had started recording the public complaints of family members who were searching for their missing daughters. Esther had a small notebook where she noted details of the women whose dead bodies were appearing in the desert areas and along the city’s outer edges (Wright, 2016; Cacho, 2009).

As part of the group’s preparations for this meeting with the mayor, one of Esther’s friends, Maria Elena Vargas, who had just mastered the new spreadsheet program, *Excel*, offered to turn Esther’s hand-written accounts of corpses and abduction dates into “data”. When the mayor failed to appear for their appointment, the women refused to leave the governmental offices until he arrived. Soon, word spread that there were a group of women “occupying the mayor’s office” (Wright, 2016, p. 9). It was at that moment that Esther pulled out the data: *The List*. It was this technology that captured the attention from the authorities. As Esther later explains; “[*The List*] got their attention. They did not think that a bunch of women could count!” (Wright, 2016, p. 9) According to Wright (2016), this was the first “occupation” of a mayor’s office to protest violence against women in the history of Ciudad Juárez. Moreover, this was the first time that “data” was presented

in order to contest what was being officially denied: “women and girls were being killed and abducted at alarming rates. The disappearances were real” (Wright, 2016, p. 9).

This first citizen effort to count deaths and disappearances became known as “The Public List”. It suddenly became the official record for disappearances in Ciudad Juárez, since the local government had not been interested in collecting information on this matter (Wright, 2016). In this sense, *The List* can be considered one of the first citizen forensic technologies designed to produce independent knowledge of the status of disappearances in the state. This was also a way to bring the disappeared girls back into the public forum, to be discussed, acknowledged and accounted for. In sum, *The List* was the first technology that opened possibilities for alternative modes of forensic knowledge production, and, at the same time, challenged the local authorities’ expertise.

Most of the names that constituted *The List* had experienced the economic deprivation and vulnerability that is familiar for women in Ciudad Juárez. The enforcement of NAFTA and the ideal of global manufacturing brought people from all over the country to the state of Chihuahua (most of them women and young families). These young women were looking for better job opportunities and saw in Ciudad Juárez the possibility to live in a blooming city with easy access to the U.S. However, as the list of disappearances grew, the sight of decomposing female bodies and the complaints of families proliferated in the region. Yet, local authorities continued their efforts to normalise the violence. After all, there was no reason to protest against the lack of public information regarding disappearances, incompetent or non-existent professional police investigations of the cases, or the lack of reliable forensic institutions since “there was no cause for concern among good families that kept a good handle on their female members” (Wright, 2016, p. 9). This situation provoked the first group of mothers, led by human rights defender Esther Chavez Cano, to action. This group was soon joined by several social and civil society organisations from Ciudad Juárez to form the first feminist coalition, The Coalition of

Organizations for Women (*La Coordinadora de ONGs Pro de la Mujer*). Together, these civil society groups organised meetings and events throughout the city in order to make the names and stories from *The List* visible:

They held press conferences in front of official buildings, they led the press and activists [from] around the world on tours through working class neighbourhoods, they introduced the family and friends of the murdered and disappeared women/girls to an increasingly concerned international public, they presented the victims of these crimes as everyday Mexican women and girls, with families, with hopes and dreams, with lives to live (Wright, 2016, p. 10)

These activities aimed to raise public awareness of the situation in Ciudad Juárez, not only among civil society but also among the private companies that owned *maquilas* factories in the region. The group had the further aim of counteracting the government's attempts to normalise violence against women not only in Ciudad Juárez, but in the state of Chihuahua more widely. By 1998, the National Human Rights Commission issued a specific recommendation aimed at redressing the local authorities' investigation and prosecution of these crimes. Additionally, a Special Prosecutor's Office was created to investigate crimes against women, the first in the country's history (Wright, 2016, p. 10). In *maquiladora* factories, programs for the protection of women and to raise awareness of sexual violence were implemented. In the same year, the word femicide, *feminicidio* in Spanish, started to become part of the lexicon used among activist and feminist groups in the northern part of Mexico to designate the killing of women and girls with impunity. The use of the term *feminicidio* along with *The List* and the growing number of civil society organisations demanding a stop to the disappearance and murder of women made it very difficult, if not impossible, for the authorities to continue denying the situation. The continuous violence against women was *knowable* and therefore *fightable* (Wright, 2016, my emphasis).

Campo Algodonero: The Cotton Field Case

On the 6 and 7 of November 2001, the discovery of the bodies and skeletal remains of eight women in an abandoned cotton field in Ciudad Juárez raised concerns among civil society and international media. There is no record of who found the bodies or how the police arrived at the scene. The bodies were found in an advanced state of decomposition, making it difficult for a visual forensic identification to be made. Also, the bodies showed signs of torture, and due to the semi-nude conditions in which they were found, it was “possible to establish with high degree of probability that it was a crime sexual in nature” (Doretti, 2009a; IACHR, 2007).⁶⁸

Two days after the discovery, the public prosecutor in charge of the investigation publicly announced a list of the eight victims that were found in the cotton field: Claudia Ivette Gonzalez Banda, Laura Berenice Ramos Monarrez, Guadalupe Luna de la Rosa, Maria de los Angeles Acosta Ramirez, Esmeralda Herrera Monreal, Veronica Martinez Hernandez, Barbara Araceli Martinez Ramos and Mayra Juliana Reyes Solis. Each had a ‘Missing Person’ report filed, had disappeared over a span of approximately one year, with each disappearing on a different date, and from a different location. They were all young, ranging in age from 15 to 21 years (IACHR, 2003, paragraph 46). According to official records, the identification of the victims was enabled by the confessions of Mr. Javier Garcia Uribe and Mr. Gustavo Gonzalez Meza, both of whom were apprehended in relation to the case, and confessed to having committed the crimes. Even though some of the girls had disappeared a year before, the confession clearly stated the clothes that each girl was wearing, the date when the abduction took place, and specific details on how the

⁶⁸ Official record of removal of unidentified body No. 188/01.

victims were sexually abused, how they were killed, and their bodies disposed of in the cotton field (Doretti, 2009a; IACHR, 2007). Family members and non-governmental organisations expressed concerns regarding both the circumstances of these crimes and the authorities' arbitrary detention of the two confessed criminals, who had, until that moment, no evident connection to the crime (IACHR, 2007).

By the time this case captured the attention of civil society, the concerns of family members regarding the inability of local authorities and forensic experts to carry out basic investigational procedures for criminal cases was well documented. To highlight the lack of procedures in police investigations, local NGOs had been recording the shortcomings in data collection, noting the failures of authorities to complete activities such as immediately distributing the photographs of missing persons, visiting the location where the victim was last seen, or listing and cross-referencing the different disappearance cases according to times of abduction, times of death and locations where bodies had been found (Amnesty International, 2003; IACHR, 2003). The failure of the authorities to carry out effective searches for the Cotton Field Case led the families of the victims to revisit the site on 24 and 25 February 2002, three months after the discovery was made. During these searches, families recovered several personal items that belonged to the victims, such as electoral IDs, work IDs, sundry items of clothing, nine shoes, and eleven diverse objects (IACHR, 2003, paragraph 48; IACHR, 2007, paragraph 86). It was unclear whether the authorities had overlooked these items while carrying out the initial forensic analysis of the crime scene, or whether someone may have placed the items after the discovery of the bodies was made. After all, the site was not cordoned-off by the police and, therefore, anyone could have entered the area.

During the visit of the Special Rapporteur on the Rights of Women for the Inter-American Commission on Human Rights (IACHR) to Ciudad Juárez during the same month (February 2002), family members and nongovernmental organizations expressed their

concerns about the identification process of the victims. These worries related to several inconsistencies found in the case files, and the often contradictory and incorrect information given to the families pertaining to the identity of their loved ones. An IACHR 2003 report on 'The situation of the rights of women in Ciudad Juárez, Mexico', records the experience of a family member who was reportedly denied the opportunity to see the remains of their loved one for her own protection, while in others cases, the identified remains had still yet to be returned to their presumed families. Thus, some relatives expressed serious doubts as to whether the body of their loved one had really been found, or if, perhaps, they might keep hoping that their missing relative could still be found alive (IACHR 2003, paragraph 47).

A month after the visit of the Special Rapporteur to Ciudad Juárez, in March 2002, Irma Monreal Jaime (mother of Brenda Esmeralda Herrera Monreal), Benita Monarrez Salgado (mother of Laura Berenice Ramos Monarrez) and Josefina Gonzalez (mother of Claudia Ivette Gonzalez), along with the nongovernmental organisation Network of Human Dignity and No Violence, (*Red de Dignidad Humana y no Violencia*) filed a petition to the IACHR to investigate the case. This petition accused the Mexican government of dereliction of duty and due diligence regarding the criminal investigations and identifications made in relation to these three specific cases that were part of the Cotton Field case.

By the time these disappearances occurred, civil society and local non-governmental organisations were well aware of the vulnerability of teenage girls and young women in Ciudad Juárez and, more recently, in the city of Chihuahua. Moreover, the public, especially those affected by the violence, were apprised of recommendations of the National Human Rights Commission to the Mexican government, issued in 1998, that asked local authorities to redress their investigation and prosecution of these crimes.

Further, Suly Ponce, the Special Prosecution Officer for Ciudad Juárez between 1999 and 2002, publicly stated in a televised interview:

When we started in the Special Prosecutor's Office, we didn't even have the most basic equipment: gloves, paper bags, police tape; we did not have a culture of preserving the crime scene; those areas were contaminated, we ended up losing evidence and it became very difficult to find the culprits.⁶⁹

Following this interview, in 2003 Amnesty International documented that when this office was inaugurated, the department received over twenty bags of unidentified remains from previous administrations, as well as case dossiers that were badly damaged after a flood in their archive premises (Amnesty International, 2003, p. 42). In sum, forensic institutions in Ciudad Juárez did not have the infrastructure nor the political will required to investigate these disappearance cases or to prosecute those responsible.

From November 2001 until the 26 July 2002, several forensic analyses were carried out on the eight bodies that were found at *Campo Algodonero*, by local and federal authorities. These analyses included autopsy, identifications made through cranial photo superimposition, forensic anthropological reports, and forensic DNA tests. These tests were carried out by the Federal Prosecutor's Office (PGR), with two sets of results conducted in 2002 and 2004, respectively. During this time, the families of the victims stated that although the forensic identifications of the bodies had been made, they had not been allowed to view their relatives' remains and, in some cases, had received closed coffins, with accompanying instructions not to open them 'for their own good'.

Due to these inconsistencies and the government's lack of transparency during their investigations of these crimes, in December 2003 two non-governmental organisations,

⁶⁹ This interview is part of the documentary '*Senorita Extraviada*', Missing Young Woman (2001) by Lourdes Portillo: Distributed by Women Make Movies, New York, USA.

the Washington Office of Latin America (WOLA) and the Mexican Commission for the Promotion and Protection of Human Rights (MCPPHR), made a request to the Argentine Forensic Anthropology Team (*Equipo Argentino de Antropología Forense*, EAAF) to provide forensic assistance in dealing with the unidentified remains of the murdered women of Ciudad Juárez and Chihuahua (EAAF, 2005; Doretti, 2009a).⁷⁰ This request was later backed up by the local non-governmental organisation Justice for Our Daughters (*Justicia para Nuestras Hijas*)⁷¹ and the Mexican Commission to Prevent and Eradicate Violence against the Women of Ciudad Juárez and Chihuahua (*Comisión Nacional para Prevenir y Erradicar la Violencia Contra las Mujeres*, CONAVIM).

In June 2004 the EAAF travelled to Ciudad Juárez in order to conduct an examination of the status of forensic investigations regarding the unidentified remains that were in the custody of the local authorities in Ciudad Juárez. In order to conduct an assessment of the situation in the state of Chihuahua, the team analysed the cases of twenty four murdered women and interviewed three families who had expressed their distrust of the local authorities' forensic identification process (Doretti, 2009a).

Following this first analysis of the situation in Ciudad Juárez, in May 2005 the EAAF team, led by forensic anthropologist Mercedes Doretti, signed a contract with the local Prosecutor's Office of the state of Chihuahua (PGJE) to carry out the identification of the unidentified female remains in the possession of the authorities of Ciudad Juárez and the state of Chihuahua.⁷² Further, the team was entrusted to reassess the cases where families

⁷⁰ The Argentine Forensic Anthropology Team (EAAF) is a non-governmental, not-for-profit organisation that applies forensic sciences, mainly forensic anthropology and archaeology, to the investigation of human rights violations. It was established in 1984 by the North American forensic anthropologist Clyde Snow, to investigate disappearance cases in Argentina that occur under the military government that ruled from 1976 until 1983. Information taken from: <http://www.eaaf.org/>. See also Chapter *On Forensics*.

⁷¹ *Justicia para Nuestras Hijas* is a local non-governmental organisation founded by Norma Ledezma, mother of Paloma Angelica Escobar Ledezma, disappeared and killed in 2001. Norma's engagement with forensic and police knowledge is analysed in the next chapters.

⁷² In Spanish the Project was called: *Proyecto sobre Identificación de Restos de Mujeres no Identificados o de Dudosa Identificación en Ciudad Juárez y la ciudad de Chihuahua*.

had doubts about the identity of the remains they had received. Even though the original agreement projected that the EAAF's project would last for seven months (that is, until December 2005), this timeline was extended until 2009 as a result of the complex analyses required by these cases. Some of these issues stemmed from serious inaccuracies in all the stages of the forensic processes conducted during the local authorities' initial investigations. These problems ranged from inaccuracies in the analyses of crime scenes, and in the collection and protection of evidence, a lack of chain of custody for most case files, and, further, some of the genetic tests carried out by local and federal agencies contradicted one another (Doretti, 2009a; EAAF, 2005).

For instance, in July 2005 the EAAF received thirty-five containers (boxes and bags containing bodies) from forensic authorities in Ciudad Juárez that, according to the records held by the Forensic Medical Services (SEMEFO), contained female unidentified human remains, including the unidentified skulls of several individuals, and non-biological evidence associated with the cases (Doretti, 2009a). While analysing these items, the EAAF discovered that some of the case files were missing: not all of the remains they received had a corresponding case file or an attached case identification number. Additionally, some case files showed pictures of the remains as they were discovered in the crime scene, but, when compared to what was handed in by the authorities, they were found to be missing body parts. For example, gross inconsistencies were found in the case of Veronica Martinez Hernandez, who was initially identified as one of the victims of the *Campo Algodonero*. Local authorities publically declared that her remains had been found in the cotton field but they were, in fact, first discovered ten months later in a vacant lot 7 kilometres away from the *Campo Algodonero* site. Furthermore, some of Veronica's body parts, which, according to records, were in the custody of the local authorities, could not be located. So the EAAF conducted a search in local mortuaries, cemeteries, and local medical schools, only to discover that Veronica's spinal column and sacrum bone were in

Ciudad Juárez School of Medicine without the appropriate documentation to allow human remains to be used for educational purposes. The upper part of Veronica's right femur is still missing (Doretti 2009a).

EAAF's forensic work became a vital element during the auditing process, and after years of work, its assessment confirmed serious methodological and procedural irregularities in all phases of the forensic investigation. In many of the files, the pages were not officially numbered, making the removal or incorporation of papers or evidence impossible to trace; even more, there were technical and credibility problems with the results of the genetic analyses. This situation resulted in conflicts between the forensic analysis of local pathologists, and the results of the forensic genetic analysis carried out by federal institutions. Therefore, wrong identifications had been made (EAAF, 2005; 2006). Unlike other countries where EAAF had worked⁷³, in Mexico, it was not the lack of infrastructure, and forensic technologies such as DNA analysis or medical examiners expertise what was missing, but rather, the ability of carrying out a systematic and reliable analysis of each case. In short, what was missing in Chihuahua, and is still missing in several parts of the country, is political willingness to locate and identify disappeared persons from all over the country.⁷⁴

The EAAF's 2006, report on Mexico states that:

[...] many of the [unidentified] remains from Ciudad Juárez have had previous anthropological and pathological analyses, as well as dental records and genetic studies conducted on them. In some cases, the reports produced by official expert witnesses from one discipline contained results that contradicted the reports produced by an official expert witness from another discipline working on the same case.

⁷³ According to its webpage, the Argentine Team of Forensic Anthropology has worked since 1984 in more than thirty countries including Colombia, Salvador, Guatemala, Namibia, Kenya, Sierra Leone, Morocco, Croatia, etc. See: http://eaaf.typepad.com/eaaf_countries/ Accessed: October 2016.

⁷⁴ This same assertion was made by several NGOs during my fieldwork in Mexico see: Cruz-Santiago Field Notes, Mexico City, 2014 -2015.

[...] In some cases, multiple genetic tests conducted on a specific set of remains produced different results—indicating both exclusion from and inclusion to a biological relationship with a given family, thereby contradicting each other. The confusion resulting from these conflicting forensic reports created a lack of trust between families of victims and forensic officials (EAAF, 2006, p. 5).

During the EAAF's work in Chihuahua from 2005 to 2009, the team analysed the remains of eighty-three females. From these, thirty-one have been identified and fifty-two remain unidentified. Additionally, the EAAF interviewed and collected 194 DNA samples from seventy-five families with disappeared female relatives (Doretti, 2009a). During their time in Mexico, the EAAF worked closely with NGOs such as Justice for Our Daughters and Bring Our Daughters Back Home (*Nuestras Hijas de Regreso a Casa*). These groups helped the EAAF's investigations by providing information of the circumstances surrounding the disappearances or deaths of their loved ones.

In 2006, following a thorough analysis of the *Campo Algodonero* case (conducted as part of the EAAF's technical assistance programme) the EAAF concluded that three of the bodies found at the scene had been misidentified, and, in fact, belonged to other girls who had also been reported as disappeared. The original list named eight victims; of these eight, only five were correctly identified. It was shown that one victim was misidentified after it was found that her DNA was not a match for any of the familial samples taken by the EAAF, her identity remains unknown. Two further identifications were proven to be false, and new identities were assigned to the victims. The EAAF also concluded that Veronica Martinez Hernandez, who was previously identified as one of the eight victims from the Cotton Field Case, had been misidentified. After a search of the local mortuary and School of Medicine, Veronica's remains were found to be part of another case where female human remains were found in a vacant lot in 2002, enabling her to be correctly identified.

The following is the list of names provided by Mexican authorities detailing the victims from the *Campo Algodonero* on November the 9th, 2001. Along each name, some details on the identification process are given. These are details I have collated from Admissibility Petitions to the IACHR 281/02, 282/02 and 283/02, the testimony of Mercedes Doretti before the Inter-American Court of Human Rights (I/A Court H.R.) and from the EAAF's annual reports from 2001 until 2007.

Victims from <i>Campo Algodonero</i> : The Cotton Field Case	
Claudia Ivette Gonzalez Banda 20 years old. Disappeared on 10 October, 2001.	Identification made by local authorities. The family did not ask the EAAF for an audit of the state's forensic work.
Guadalupe Luna de la Rosa 20 years old. Disappeared on 30 September, 2000.	<i>Misidentified.</i> Her status still remains 'disappeared' as of October, 2016. New identification by the EAAF: Maria Rosina Galicia Meraz , 17 years old, Disappeared on 30 July, 2001.
Maria de los Angeles Acosta Ramirez 20 years old. Disappeared on 25 April, 2001.	<i>Accurate Identification</i> made by local authorities.
Esmeralda Herrera Monreal 15 years old. Disappeared on 29 October, 2001.	<i>Accurate Identification</i> made by local authorities
Barbara Araceli Martinez Ramos 20 years old. Disappeared on 26 December, 2000.	<i>Misidentified.</i> Her status still remains 'disappeared' (as of data from April 2009)

<p>Mayra Juliana Reyes Solis.</p> <p>17 years old. Disappeared on 25 June, 2001.</p>	<p><i>Accurate Identification</i> made by local authorities.</p>
<p>Human Remains 195/01</p> <p>Recovered from the Cotton Field in Ciudad Juárez in November 2001.</p>	<p><i>Unidentified.</i> Several DNA comparisons were made between these remains and the EAAF's DNA samples taken from families and no match was found.</p>
<p>Laura Berenice Ramos Monarrez</p> <p>17 years old. Disappeared on 25 September, 2001.</p>	<p><i>Accurate Identification</i> made by local forensic authorities. The forensic identification process was made under suspicious circumstances. When Laura's mother arrived at the mortuary she was not allowed to see Laura's body for 'her own protection'. Four months passed before she was allowed to visually identify her daughter. Laura's identification was made through the clothes she was wearing on the day she disappeared, and a cranial super-imposition photo. Laura's family insisted that they wanted to pay for an independent DNA analysis to be carried out by private laboratories in the U.S. Local authorities denied this petition, arguing that the procedure was not regulated by law (Admissibility Petition, 283/02).</p> <p>Once Laura's body, in the form of skeletal remains, was given to her family, Laura's mom took a small bone, a collarbone, out of the box that was handed by the authorities. Laura's family decided to incinerate her body, but kept the collarbone for future DNA analysis (Doretti, 2009a).</p> <p>Laura's family gave the collarbone to the EAAF on 24th July, 2006. Genetic analysis confirmed that this bone fragment corresponded to Laura Berenice.</p>
<p>Veronica Martinez Hernandez</p> <p>19 years old. Disappeared on 19 October 2000</p>	<p><i>Misidentified.</i> In 2006, the EAAF determined that the remains of Veronica Martinez Hernandez were found on 22 September, 2002 in a vacant lot, 7 kilometres away from the <i>Campo Algodonero</i> site. Veronica's case file was misplaced, and the EAAF insisted several times that the local authorities retrieve it. The physical evidence (clothing and personal items) collected from the site where she was found is also missing. The EAAF only had access to the photos that were taken of the physical evidence collected at the time of the discovery of the body: a pair of earrings, a small collar, a shirt, a <i>maquila</i> uniform, and a stone. The stone was inside one of the pockets of the <i>maquila</i> uniform. Veronica's mother recognised all these</p>

	<p>items as belonging to her daughter, especially the stone inside the <i>maquila</i> uniform. She always asked Veronica to carry a stone for ‘her own protection’, especially every time she left home in the early hours of the day to make her way to work at the <i>maquiladora</i>, and at night after she had ended her shift so that Veronica could always defend herself from assault or molestation on her way home (Doretti, 2009a, p. 22).</p> <p>New identification by the EAAF: Merlin Elizabeth Rodriguez Saenz, 17 years old, disappeared on 30 April, 2001.</p>
--	--

After this investigation, the final list of victims from the Cotton Field Case named Brenda Esmeralda Herrera Monreal (IACHR, 282/02 case), Claudia Ivette Gonzalez (IACHR, 281/02 case), Laura Berenice Ramos Monarrez (IACHR, 283/02), Maria Rosina Galicia Meraz, Maria de los Angeles Acosta Ramirez, Mayra Juliana Reyes Solis, Merlin Elizabeth Rodriguez Saenz, and one unidentified set of remains. Further investigations also showed that the confessions of guilt given by Mr. Javier Garcia Uribe and Mr. Gustavo Gonzalez Meza were obtained under torture. On 8 February 2003, Mr. Gonzalez died inside prison under suspicious circumstances (which did not result in criminal charges). Mr. Javier Garcia Uribe was acquitted in 2005 due to a lack of evidence for his involvement in these crimes, after having been initially sentenced to fifty years in prison for the eight murders (IACHR, 2007; EAAF 2005).

In December 2009, the I/A Court H.R. issued a judgment declaring that the Mexican State was internationally responsible for the disappearance and subsequent death of Brenda Esmeralda Herrera Monreal, Laura Berenice Ramos Monarrez and Claudia Ivette Gonzalez. Further:

The Mexican State admitted to the contextual facts concerning violence against women in Ciudad Juárez, mainly relating to the murders that had been recorded since the beginning of the 1990s. It also acknowledged that irregularities occurred during the investigations, but afterwards, these were fully rectified, and due to the irregularities of the

criminal investigations, the personal integrity of the next of kin of the victims was affected.

[...] However, the State claimed that it had not violated the rights to life of the victims (article 4 of the American Convention on Human Rights - ACHR) to physical integrity or humane treatment (article 5 ACHR), or to dignity or personal liberty (article 7 ACHR), considering that the State agents did not participate in any of the three murders. Therefore, the State acknowledged responsibility only for violations of the right to a fair trial (article 8 ACHR), the right to judicial protection (article 25 ACHR), and the right to physical integrity and humane treatment (article 5 ACHR -exclusively regarding the next of kin) (Acosta Lopez, 2012).

In April 2007, the IACHR expressed its concerns regarding the high rate of femicides throughout the country. In October of the same year, the European Parliament called on Mexico to update its legal code to the standard of its international commitments in order to eliminate gender violence and to reform its judicial system (EAAF, 2007). Nonetheless, deficiencies in Mexican forensic science systems had not yet been resolved, nor had the continuous disappearance of young girls in Ciudad Juárez, Chihuahua and other parts of Mexico ceased.⁷⁵ According to official data from October 2016, there are 112 missing women and teenage girls in Ciudad Juárez, with 180 missing reports in the state of Chihuahua as a whole. However, local and international NGOs believe that the number of disappeared women in the state is still higher than these figures.

The Cotton Field Case can be seen as a snapshot of the status of forensic science and forensic science provision in Mexico in the early 2000s. Families of victims of violence have continuously struggled for the disappearances and killings of women in the northern part of the country to be acknowledged not as a private affair, but as a matter of public concern. So far, they have had to face the authorities' dereliction of duty and

⁷⁵ In recent years, civilians from the State of Mexico, Puebla and Tlaxcala have been recording high rates of disappearances and murders of females. See for instance: <http://www.sinembargo.mx/05-10-2016/3100491>, Accessed: 10 October, 2016.

criminalisation of the disappeared and murdered. The practices employed by the families in order to make disappearances a matter of public concern have required them to perform duties that are generally thought of as being the state's responsibility. For example: transforming written notes to data using Excel and lists, the collection of data on homicides and violent deaths, circulating pictures of their disappeared loved ones, and revisiting crime scenes in order to ascertain whether forensic work has been properly carried out. The efforts of these groups generated the necessary momentum for international forensic teams and international organisations to visit the country and provide technical assistance to the Mexican government.

Forensic Science in Mexico and the work of Forensic Independent Teams

The work of the EAAF in Mexico extended beyond the technical assistance that the group provided for the state of Chihuahua and the city of Ciudad Juárez. In fact, the participation of independent forensic teams in Mexico has long been promoted by international organisations, such as the United Nations, the International Committee of the Red Cross (ICRC) and the IACHR. Support from international experts has been geared towards building national forensic capabilities, along with promoting and protecting human rights, including pressuring state security forces to end the use of torture.

International attention was drawn to human rights violations occurring in Mexico after a series of *in situ* visits made by Special Rapporteurs from the United Nations in the 1990s. These visits were intended to gather information on events such as the repressive action taken by paramilitaries and the Army in Chiapas in the wake of the 1994 Zapatista uprising, the 1995 killings in Agua Blanca, and the enforced disappearance of hundreds

of political dissidents during the 1960s, with particular attention to the disappearance of Rosendo Radilla Pacheco in Guerrero in 1976.⁷⁶

These events took place during the seventy-year ruling of one political party: the Institutional Revolutionary Party (*Partido Revolucionario Institucional*: PRI). From 1930 to 2000, the PRI won every presidential election held in Mexico. Unlike countries elsewhere in Latin America, where military governments took hold of power during the 1970s, Mexico was the ‘Perfect Dictatorship’, as the Peruvian writer Mario Vargas Llosa put in 1990. For Vargas Llosa:

The perfect dictatorship is not communism, not the Soviet Union, not Cuba, but Mexico, because it is a camouflaged dictatorship. It may not seem to be a dictatorship, but it has all the characteristics of dictatorship: the perpetuation, not of one person, but of an irremovable party, *a party that allows sufficient space for criticism, provided such criticism serves to maintain the appearance of a democratic party*, but which suppresses by all means, including the worst, whatever criticism may threaten its perpetuation in power (White, 2013, my emphasis).

This ‘perfect dictatorship’ allowed for human rights abuses to be perpetuated silently and systematically against Mexico’s most vulnerable populations (indigenous people, girls and women, as well as peasants), and against every person that openly opposed those in power. According to a report by the National Commission on Human Rights (CNDH, 2001), 532 political dissidents disappeared in Mexico in the 1970s. These persons were kidnapped by federal, state or municipal officials, and in most cases, were also tortured (CNDH, 2001). In 2000, however, an alternative party won the presidential elections for the first time in Mexican history. Vicente Fox Quezada became the first president from the opposition party, the National Action Party (*Partido Acción Nacional*: PAN), a

⁷⁶ For instance, in 1968, state forces attacked an unknown number of protesting students in Tlatelolco Plaza, Mexico City. There is no official tally of the dead, but estimates range from 14 to 325. The massacre galvanized a growing conflict with the Institutional Revolutionary Party (PRI) government and spurred the formation of leftist and guerilla groups. (Open Society, 2016, p. 22)

conservative party founded in Mexico in 1939. On December 2 2000, one day after Vicente Fox took office, he signed a Technical Cooperation Program with the United Nations that aimed to address five strategic areas of improvement for Mexico: National Human Rights initiatives, indigenous rights, administration of justice, economic, social and cultural rights, and vulnerable groups (EAAF, 2001, p. 78). As part of the new government strategy, the President also created the ‘Special Prosecutors Office for Social and Political Movements of the Past in Mexico’ (*Fiscalía Especializada para Movimientos Sociales y Politicos del Pasado en Mexico*: FEMOSPP), to assess the oppression faced by socio-political movements during the ruling of the PRI, with the aim of bringing the perpetrators of disappearances in the 1960s and 1970s to justice. Fox’s strategy to sign a cooperation agreement with United Nations for the respect of human rights and the establishment of FEMOSPP, is a key moment for the development of forensic expertise in the country. From this moment up until today, the Mexican government will start receiving international technical support to build forensic capacities. This situation is similar to other democratic transitions in Latin America that aimed to investigate the crimes of the past. However, Fox’s FEMOSPP will only operate until 2007, without fulfilling the promises of its creation: to bring the perpetrators of human rights violations to justice.

In 2001 the United Nations High Commissioner for Human Rights requested that the EAAF join an advisory mission to the Mexican government. Under the framework of the Technical Cooperation program, the EAAF “write a protocol for investigating deaths suspected of having been caused by Human Rights Abuses” (EAAF, 2001, p. 78). The development of this protocol under the leadership of Dr. Maria Cristina de Mendonca, a Portuguese legal-medical expert, detailed a practical guide for carrying out investigations that included the analysis and collection of human remains. These programs were “meant to begin preparing those with medical and anthropological backgrounds to act not only as

expert witnesses, but also as trainers who could then disseminate these techniques in different parts of the country” (EAAF, 2001, p. 79). The dissemination of these forensic techniques were meant to enable forensic scientists to highlight the human rights abuses committed by federal and municipal forces during the 1960s, as well as to equip medical examiners with the necessary expertise to document these atrocities. As explained in Chapter Two (on *Forensis* and STS), the development of forensic expertise in Latin America was in response to enforced disappearances and human rights violations committed by military governments, particularly especially during the 1970s and 1980s when ‘Operation Condor’, a U.S. supported strategy to combat communism, was promoted throughout South America. In the case of Mexico’s ‘perfect dictatorship’, which stayed in power for 70 years, there were disappearances and extra-judicial killings that required investigation.

The IACHR, has had an important role in the prosecution of human rights abuses committed by states. The IACHR, created in 1959, is a principal and autonomous organ of the Organization of American States (OAS), and its mission is to “promote and protect human rights in the American hemisphere”.⁷⁷ In 1979, the I/A Court H.R. was installed for the protection of human rights in the region. Since its creation, the Court has offered provision for petitions from individuals to be filed against governments, for instance: the petition submitted to the I/A Court H.R. via the IACHR against the Mexican government for their inability to adequately investigate the femicide of three of the victims from the *Cotton Field Case*. Following the precedent set up by this petition case, in 2008, in a joint effort between the Association of Relatives of Disappeared, Detainees and Victims of Human Rights Violations in Mexico (*Asociación de Familiares de Detenidos, Desaparecidos y Víctimas de Violaciones a los Derechos Humanos en México*:

⁷⁷ Information taken from: <http://www.oas.org/en/iachr/mandate/what.asp>, Accessed: September 2016.

AFADEM) and the Mexican Commission for the Defence and Promotion of Human Rights (*Comisión Mexicana de Defensa y Promoción de los Derechos Humanos: CMDPDH*), a demand was filed to the I/A Court H.R. against the Mexican State for the disappearance of Rosendo Radilla Pacheco.

On 25 August 1974, Rosendo Radilla Pacheco was detained and disappeared by members of the army. He was travelling with his eleven-year old son in a bus from Atoyac de Alvarez towards Chilpancingo, Guerrero, in the southern state of Mexico. The army had installed checkpoints along the highways searching for activists working against the one-party regime. Since the 1960s, over 400 individuals from Atoyac were disappeared by security forces when “the government began a counterinsurgency campaign in Guerrero against the Party of the Poor (*Partido de los Pobres*), a guerrilla group started by a local school teacher, Lucio Cabañas” (EAAF 2007-2009, p. 151). Mr. Rosendo Radilla was a social leader and former municipal president of Atoyac de Alvarez in 1956, as well as a teacher and father of twelve. He used to compose and sing Mexican folk songs, *corridos* that expressed the struggle of social leaders in Guerrero, such as Lucio Cabañas and Genaro Vazquez (Dutrénit and Jaloma, 2014).

As witnessed by his son, Mr. Rosendo Radilla was detained because the government knew that he composed *corridos* (IACHR, 2009, Paragraph 125):

My father said: ‘What I am charged with?’

- ‘You write *corridos*’
- ‘Is that a crime?’
- ‘No, but for the time being *ya te chingaste* [you are fucked up] In the meantime, *ya te chingaste*.’⁷⁸

⁷⁸ Narrative description of events according to Dutrénit and Jaloma (2014, p. 182 footnote 4, my translation).

In 2009, a year after the case was accepted at the I/A Court H.R., a court ruling obliged the Mexican government to locate Mr. Rosendo Radilla, dead or alive. During the same year, following a request made by the CMDPDH and the AFADEM, members of the EAAF provided training to state officials in ante-mortem and burial site data collection and procedures for conducting witness interviews (EAAF 2007-2009, p. 153). Additionally, the EAAF provided an introduction to forensic sciences to AFADEM members to furnish them with a better understanding of the procedures of forensic anthropology and of their personal role and rights relating to forensic investigation processes (EAAF 2007-2009, 153).

Following the IACHR sentence, forensic investigations and exhumations were carried out in and around the Atoyac Military Base. As directed by the General Attorney Office at the time, this project was carried out through collaboration between national and independent *peritos* (experts). The forensic work carried out at Atoyac's Military Base was supported by the notion that the participation of independent experts gave credibility to proceedings, and promoted the rights of the victims' families, particularly in ensuring accountability for the forensic work carried out on site. In 2011 the anthropologist Arturo Talavera was appointed the principal forensic expert for the Radilla case. In an interview carried out by the historians Silvia Dutrénit and Elena Jaloma (2014), Talavera discussed how his scientific participation in this case was separated from any political interests.

[...] When we were solicited to collaborate (*coadyuvar*) with the General Attorney's Office [PGR], we were very clear: we are academics, I mean, we don't have any political flag, or support anyone or dismiss anyone, and we were not going to accept being put under pressure [*sometidos*], we were only going to give an academic and scientific opinion, with an academic method. [...] One does not want to be popular or liked by everyone, it's all about being truthful to science,

to the academic aspect. (Taken from Dutrénit and Jaloma, 2014, my translation)⁷⁹

The IACHR recommended that Mr. Rosendo Radilla's family members, along with independent experts (or *peritos*), must be present during any exhumation process. Silvia Diaz, physical anthropologist from the National Institute of Anthropology and History (INAH) and part of the expert team of the Special Prosecutors Office for the Investigation of Federal Crimes (*Subprocuraduría Especializada en Investigación de Delitos Federales*), from the Attorney General's Office, and who took part in the exhumation processes, described how:

It's difficult to do your job; there are lots of people around you, all the mass media, there are relatives [of the victims], police officers, a lot of people who are watching every movement you do, so, sometimes it is not easy to deal with [...] The job [we do] in these contexts involves feelings, involves emotions, and when you do scientific work, the last thing you have to do is to involve these issues. (Taken from Dutrénit and Jaloma, 2014, my translation)

Forensic experts participating in the exhumations and identifications of victims have long argued that their expert work is separated from both politics and emotion, in the name of remaining bound to science and scientific knowledge. As Stover and Ryan argue (2001, p. 7), it is the role of national and international forensic experts to "listen and interpret the evidence". In fact, it was forensic anthropologist Clyde Snow who coined the term 'osteobiography', meaning the capacity to understand someone's individual biography through 'listening' to what a bone has to say: Bones never lie, and forensic anthropologists have the expertise to carefully listen to them speak.

⁷⁹ Arturo Talavera is a researcher from the National Institute of Anthropology and History, INAH, principal forensic expert for the Rosendo Radilla case since 2011 (Dutrénit and Jaloma, 2014).

However, STS and feminist scholars have long argued that scientific knowledge is always socially constructed and is, therefore, political (Cole, 2003; Lynch *et al.*, 2008; Lynch and Jasanoff, 1998; M'charek 2000, 2013; Latour, 1983). The 'politics' that forensic experts constantly seek to distance themselves from are always already embedded in their scientific practices. According to conventional scientific arguments, truth and certainty can only be obtained through the lenses of an 'objective' technology that establishes a clear distinction between 'knowledge' and 'body/emotions'. In the case of human rights investigations, such as those explored in this chapter, forensic anthropology and DNA analysis are the technologies that scientists use to listen to what the dead softly speak. This is, however, not to say that forensic science offers a space where power relations, knowledge and positionality do not exist, but, rather, the practitioners of the discipline unwittingly make powerful statements on social and political life (as has been shown by: M'charek 2008, 2013; Moon 2012; Prainsack, 2011; 2009)

As for the status of forensic science in the country, Mercedes Doretti explained that 'Mexico was the first country that [the EAAF] visited, where relatives of the victims *did not believe in Forensic and DNA practices at all*' (Interview with Doretti, 2013, my emphasis). For the citizens who were in contact with the provision of forensic services in the country, it was clear that their main problem did not reside with the forensic technologies understood in the abstract, but in the techno-social spaces where forensic knowledge was produced. Given this scepticism, all of the international cooperation agreements that provided technical assistance and training to the Mexican state were doomed to fail in this regard.

In 2006, Felipe Calderon (then President of Mexico) deployed military forces in certain states of the country to combat drug cartels and reduce corruption among local police forces. However, his security strategy provoked violence to spread all over the country (Tuckman, 2013). Cases of disappearances were not only reported in Chihuahua, but in

other states such as Tamaulipas, Nuevo Leon and Guerrero. These increases in violence were explained by authorities as the result of clashes between drug cartels and state forces. The gendered discourse that was applied to the young women of Ciudad Juárez was reappropriated to characterise these teenage boys and young men as being part of drug cartels, and their associations with the ‘wrong people’ were deemed to be the cause of their disappearances and violent deaths.

The so called ‘War on Drugs’ and the violence it has generated all over the country have dramatically increased the number of homicides and disappearances in Mexico. As stated by the National Commission on Human Rights, between 2007 and September 2016, eight hundred and fifty-five clandestine burials have been discovered throughout Mexican territory, and more than 1,548 thousands bodies have been recovered from these sites.⁸⁰ From December 2006 through to the end of 2015, over 150,000 people were intentionally killed in Mexico, while the number of disappearances remains unknown (Open Society, 2016). According to the evidence gathered for the report ‘Undeniable Atrocities’ by the Open Society Justice Initiative, the increase of violence and disappearances in the country was driven by violence relating to organised crime and the state’s security strategy, which relied on an extrajudicial and indiscriminate use of force (Open Society, 2016, p. 12). Although data on the number of disappearances is either unreliable or non-existent, federal authorities maintain that the number of ‘missing’ or ‘not located’ persons in the country stands at approximately 30,000. Reportedly, 15,000 bodies remain unidentified in mortuaries all over the country due to the lack of coordination and efficient communication between forensic institutions.

⁸⁰ Information collected from the National Commission on Human Rights Report on Disappearances and Clandestine Mass Graves, Available at: http://www.cndh.org.mx/sites/all/doc/Informes/Especiales/InformeEspecial_20170406_Resumen.pdf (Accessed April 2017). For more information on clandestine burials in Mexico visit: http://archivo.eluniversal.com.mx/graficos/graficosanimados14/EU_Fosas_Clandestinas/ (Accessed October 2016)

There are poor clearance rates for almost all crimes in Mexico, including serious offences such as murder. In 2010 the national impunity rate for homicides was 80.6%, with the worst rate of 96.4% in Chihuahua. That is, for every ten homicides in Mexico, eight are unpunished (Mexico Evalúa, 2012). These poor statistics mean that civilians question not only the capacity of authorities to deal with insecurity and the sheer amount of bodies being discovered in clandestine mass graves, but also question whether there might be collusion between governmental authorities and organised crime.

As Julia, who has been looking for her son over five years, explains:

Here [in Mexico] what is happening, [differently to other countries] is that the state is against the citizens, the drug cartels are against the citizens, I mean, we [civil society] have two different battle fronts that need to be tackled. That is how I see it, otherwise there wouldn't be any reason as to why I am here [doing the search for her son and demanding justice]. (Interview with Julia outside the Ministry of Interior Offices in Mexico City where she was engaged in a hunger strike protest, July 2013).

What Julia has experienced seems to show the rule rather than the exception of the experiences of the relatives of disappeared persons in their dealings with governmental authorities. Organised crime has challenged the authority of the state, not by threatening to capture it, but by damaging and weakening it through corruption (International Crisis Group 2013, p. i). In recent years, drug cartels in Mexico have been diversifying their organised crime groups and activities. Now, they not only traffic drugs but also people (particularly women and children), they participate in mass kidnappings, steal oil from the state industry, and train gunmen that will later be used to confront other cartels and state forces (Tuckman, 2013). Drug Cartels and organised crime *de facto* control over certain territories, and their use of military grade weapons has questioned the state's monopoly on the use of force; to the extent that, in some strategic zones and highways,

the organised crime have installed checkpoints protected by gunmen in order to control and secure the transportation of illegal items (International Crisis Group, 2013).

The forensic science services in the country are overwhelmed by the high number of criminal investigations and violence produced by the 'War on Drugs'. The provision of forensic science services in Mexico is carried out independently by the local Forensic Medical Services (SEMEFO). In Mexico City this service is provided by the National Institute of Forensic Sciences (INCIFO).⁸¹ Of the thirty-two states of Mexico, only twenty have a local SEMEFO, which means that when forensic services are needed, local authorities must send all the evidence to the closest available SEMEFO, or to their headquarters in Mexico City (Garcia, 2013). Most local SEMEFOs have morgue facilities with holding capacities of 10-20 bodies. However, high levels of violence mean that, for example, when clandestine mass graves are discovered, sometimes containing hundreds of bodies, there are not enough trained staff to deal with the sheer number of corpses, nor is there sufficient space to house bodies in order to carry out identification and post-mortem examinations. Each local SEMEFO has its own group of experts that help to identify victims. This group ideally includes experts in forensic disciplines, such as fingerprint analysts, criminologists, geneticists and anthropologists. In practice, the majority of local SEMEFOs do not have access to these professionals and, thus, rely on support from the General Attorney's Office. The General Attorney's Office has registered 265 forensic specialists to attend cases across the whole country. This includes 5 forensic anthropologists, 13 specialists in facial identification (spoken portraits), 36 forensic genetics specialists, ninety-one criminalists and 122 fingerprint specialists (Lara 2014).⁸²

⁸¹ Forensic science services include post-mortem examinations and determining the cause of death, forensic anthropology, forensic odontology, fingerprints and DNA analysis. In some instances, these services include forensic psychiatry, and entomology.

⁸² http://archivo.eluniversal.com.mx/graficos/graficosanimados14/EU_Fosas_Clandestinas/, (Accessed: November, 2016).

72 Migrants in San Fernando Tamaulipas

On 22 August 2010 in the north-eastern state of Tamaulipas, local authorities discovered the tortured bodies of 72 migrants inside a *rancho* in San Fernando.⁸³ The authorities had already been informed about this massacre, thanks to the testimony of a survivor who managed to escape the scene and sought help. The group of migrants were travelling from Central America towards the north state of Tamaulipas in order to cross Mexican-U.S. border. That night, approximately 72 individuals were killed by the criminal organisation *Los Zetas*. Subsequent investigations in the following April (2011) unearthed a total of 47 mass graves containing 193 bodies in the same area of San Fernando, Tamaulipas (COLMEX, 2016; Open Society, 2016). The state of Tamaulipas has recorded one of the highest rates of violence in Mexico over recent years. This includes not only the discovery of clandestine burial sites, but those reported as disappeared, and a growing number of dead bodies marked with signs of violence appearing in public spaces, main city squares, or hanging from bridges throughout the city.

The discovery of these mass graves brought the problem of disappearances and high levels of violence to national and international attention. Families who had been long awaiting the return of their loved ones gathered outside the local SEMEFO in Tamaulipas, asking to see the bodies that had been collected from the mass graves in an effort to identify their loved ones. However, local forensic services could not cope with the number

⁸³ Tamaulipas is by far the state with the largest number of disappeared persons in the country, with almost a fifth of the total number, according to data from the National Registry of Missing or Disappeared Persons (RNPED) as of April 2016. This amounts to 5,752 of 28,161 (COLMEX 2016, p. 7). In terms of homicides in the area, in 2009 there were 12.93 homicides per 100,000 inhabitants and, in 2010, 100.95. In 2011, 196 bodies were found in clandestine graves, and were recovered without the circumstances of their deaths being clear. According to figures from the RNPED between 2005 and 2009 there were no reports of 'missing' or 'disappeared' persons in the region. However, by 2010, there were 39.50 disappeared for every 100,000 inhabitants. (COLMEX, 2016, p. 13).

of bodies that had been found. In the past, local authorities had to rely on private funeral care facilities to collect and house bodies from crime scenes. This situation resulted in several problems, such as the loss or mishandling of evidence, the bribery of medical examiners and the misidentification of bodies. In some cases, armed groups had even snatched bodies from private funeral homes while they were awaiting identification (Moreno and Tinoco, 2012).⁸⁴

For this reason, when the bodies found in Tamaulipas were collected, the General Attorney's Office took on the case and asked for the remains to be transported to INCIFO forensic facilities in Mexico City. Approximately 120 of the bodies that were recovered from Tamaulipas were transported to Mexico City, some of which had been mutilated and bore signs of torture. Although authorities hired trucks especially fitted to hold corpses, the process was not correctly administered and the corpses travelled for approximately ten hours (907.2 km) without refrigeration. This, along with the hot temperatures usually registered in Mexico (20–30 Celsius), badly damaged the already decomposed corpses, which made the identification process and preservation of evidence more difficult. Further, little or no-coordination between local SEMEFOs and the General Attorney's Office made it yet more difficult to identify the bodies and to return them to their families (Martinez, 2013).

As a result of the Mexican authorities' slow response in dealing with these cases, and the well-known deficiencies of the forensic services in the country, nongovernmental organisations from Central America, with the support of the EAAF, signed an agreement with the General Attorney's Office in September 2013 to create a 'Forensic Commission'. This Commission aimed to identify the bodies of migrants found in San

⁸⁴ In October 2012, an armed group stole the dead body of an alleged drug dealer that was waiting to be examined in a private funeral home. This case attracted wide media coverage when authorities realised that the stolen body was that of Heriberto Lazcano leader of 'Los Zetas', an important drug cartel in Mexico.

Fernando mass graves during 2010-2011 as well as those found in 2012 in Cadereyta in Nuevo Leon, a state in the northern part of Mexico. In Cadereyta another clandestine mass grave was discovered, containing approximately 49 bodies.

In 2015, while I was conducting fieldwork at Mexico City's INCIFO, the Medical Examiner employed by the institution proudly showed me the new temperature-controlled vaults that store up to 100 bodies. These special 'fridges' were behind two heavy metal doors. They opened one of these doors to show me their large capacity, and how the institution was tagging the bodies to ease identification. Some of the bodies were inside specially designed plastic bags. After we had looked inside the first vault, I asked what the other two vaults with big padlocks at the doors contained. 'Oh!', they replied, 'In those fridges are some of the bodies from San Fernando's [clandestine] mass graves. We do not have access to those. Only the *Argentiniens*'. This was not the first time that I sensed that the interviewee was uncomfortable when talking about the EAAF. They continued 'Can you believe that the bodies were transported without any sort of refrigeration? What is worse, people from Tamaulipas had spread *cal* powder [Calcium hydroxide] over the bodies! When the bodies arrived here they were a mess! They looked like sugar-dusted donuts, the Argentineans went mad.'⁸⁵ I asked if the EAAF worked regularly at INCIFO's facilities. 'Yes', they replied, 'they come here quite often. When they are working here, we are not allowed to use half of the amphitheatre. You know, they come here wearing their white 'all-in-one' suits and with masks [...]'.⁸⁶

On another occasion, the same medical examiner noted their irritation at the presence of the Argentinians: 'Look, they come here to do the same job that we do, but they get paid in dollars. Thousands of dollars!'. I could understand why they were annoyed. The examiner had previously mentioned the INCIFO's participation in a well-known case in

⁸⁵ Cal powder is Calcium hydroxide, a colourless crystal or white powder.

⁸⁶ Conversation with Forensic Scientists, Cruz-Santiago Field notes, May, 2015.

Mexico City where the human remains of Maria (pseudonym), a young woman who was reported as disappeared, were found inside a plastic bag in the southern part of Mexico City. The medical examiners at INCIFO conducted the analysis of the human remains found at the scene. They ascertained the identity of the girl and informed her family. As soon as the family received the news, they demanded an independent analysis of the case. The authorities complied with the family's petition and asked the EAAF to conduct a second analysis. Ultimately, the EAAF confirmed what the forensic experts at INCIFO had originally reported: the identification process was correct, and the human remains of Maria were given back to her parents.

Even though there are instances where the forensic work carried out by state experts is adequate, the state's forensic expertise has continuously been challenged. In the first instance, these challenges have come from family members, for example: the data presented as *'The List'* by the women in Chihuahua, or the forensic materials collected by family members in the *Campo Algodonero Case* (fragments of collarbone, IDs, clothes and other personal objects). As well as these civilian challenges, forensic expertise in Mexico has also been questioned by independent auditing services provided by the EAAF. Moreover, the forensic technical support recommended by the UN, ICRC and the IACHR highlights the need for the Mexican government to respond to the forensic challenges presented by the country's high levels of violence. Some states, especially those in the northern regions, have only recently opened new forensic DNA laboratories, while the main public university in Mexico, the National Autonomous University of Mexico (UNAM) only introduced the first undergraduate course in Forensic Science in 2013.

As a way to professionalise the criminal justice system, and to ensure its accountability, from the 18 June 2016, Mexico began operating under a new accusatory criminal justice system. This system, according to authorities, will provide greater transparency and

effectiveness in criminal prosecutions. This accusatory justice system relies on the participation of expert witnesses and cross examination in criminal trials. With the slogan ‘Science to the service of justice’, the Criminal Investigation Agency (which is part of the Attorney General’s Office) highlights the importance of forensic sciences in staying a step ahead of criminal activity. These approaches to science and security are supported by the U.S.’s “Mérida Initiative” strategy. The Mérida Initiative is a bilateral security cooperation agreement between Mexico and the U.S. During the eight years that the agreements have been in place, the U.S. has provided:

[Tangible] support to Mexican forensic services and laboratories. This support spans technical assistance to forensics laboratories to enhance their capabilities and ability to obtain international accreditation in core forensic disciplines. [...] These six core disciplines include ballistics, fingerprints, genetics/DNA, chemistry, questioned documents and crime scene investigations.⁸⁷

While Mexican authorities and forensic scientists continue to receive forensic assistance and guidance in the implementation of new technologies, the main questions regarding the disappearances of young girls and boys remains unsolved. As Brenda, who has been looking for her brother for the last seven years explains: ‘It is a scary question to ask, but who is really governing this country? Who are our authorities? Where are all these disappeared people? Why did they take them away? (Interview with Brenda, 2013). In Ciudad Juárez, things have gone back to ‘normal’. In 2012 families and nongovernmental organisations were complaining about the inability of local authorities to analyse cases of disappearances. The remains of more than fifty individuals have been held in local mortuaries without any information offered to families, who have made constant requests

⁸⁷ United States Embassy in Mexico, <https://mx.usembassy.gov/helping-consolidate-mexicos-new-criminal-justice-system-support-forensic-sciences/> (Accessed September, 2016)

for details regarding the analysis and identifications of these bodies (Najar, 2012; Norma personal communication, May 2015).

On 10 May 2015, I interviewed Norma Andrade, a well-known mother-turned-activist. Norma is the mother of Lilia Alejandra, a fifteen year old girl who disappeared from Ciudad Juárez on September 2001. Lilia was found dead two weeks later in a vacant lot near the *maquila* factory where she worked. Since her daughter's disappearance and murder, Norma has been an advocate for the rights of young girls and their families. As the co-founder of the locally—and internationally—renowned NGO Bring Our Daughters Back Home, Norma has worked to try and find the disappeared women alive. As previously noted in this chapter, this NGO worked closely with the EAAF while the team was providing technical assistance to the state of Chihuahua between 2005 and 2009. When I asked Norma about the developments to the Chihuahuan DNA Database enabled by the EAAF (after the EAAF finished their 'technical assistance programme for the identification of female human remains in the state'), Norma told me that the EAAF's work had not prospered. 'No one knows what happened to that DNA database', Norma explained, 'and now I am looking for [independent] help because I have families who are unsure about the identifications of the remains they are receiving.'⁸⁸

The forensic deficiencies encountered in the state of Chihuahua in 2001 when the bodies of eight girls were dumped in a Cotton Field are now part of a systematic problem across all thirty-two states of Mexico. A couple of months after my arrival to Mexico City to conduct my doctoral fieldwork, news quickly spread throughout the country, and in the international media, of 43 forty-three students who disappeared in the impoverished state of Guerrero, the same state from where Mr. Rosendo Radilla was forcibly disappeared in 1974.

⁸⁸ This is not a direct quote, I am paraphrasing Norma's words (Cruz-Santiago Fieldnotes, May 2015).

Concluding Remarks

In this chapter I have presented the status of forensic science services in Mexico and provided some examples of how authorities have dealt with high levels of violence in the country. I have also discussed how forensic scientists are constantly foregrounding their work through ‘objective’ technologies, thus distancing their work from politics. Further, I have argued that forensic knowledge in Mexico has been constructed via intervention and technical assistance from other countries and experts, and I have outlined how this knowledge is continually being developed, crafted and transformed. International organisations such as the ICRC, the UN, and the IACHR have tried to build capacity and to generate forensic programmes that are successful and sustainable within Mexico. However, their one-off interventions have tended to be geared towards dealing with high profile cases: providing assistance in the form of ad-hoc interventions leaves behind a large number of cases, families and local nongovernmental organisations still struggle to hold their local authorities accountable for their responsibility to properly investigate these cases.

For far too long, forensic services in Mexico have provided contradictory and incorrect information to families of disappeared persons regarding the identity of their loved ones. This has obliged families to look for independent alternatives in their attempts to locate and identify their disappeared. These independent alternatives vary from asking for the support of independent forensic research teams, such as the EAAF, to conducting their own searches. Families have attempted to avoid state corruption through self-organisation and forming their own nongovernmental organisations.

The continuous dismissal of the problem of disappearances in Mexico by authorities, as well as their lack of care and consistency in collecting forensic data, have changed citizens' relationships to forensic data. As Williams and Johnson (2005) argue, a central fear of our times is the widespread gathering of biometric data on citizens, which is creating an intelligence led surveillance apparatus that is capable of detaining and denying movement in advance (Amoore, 2014; 2011). However, in Mexico families' are collecting precisely those forensic technologies, such as lists of dead bodies, DNA Databases, bone fragments for possible DNA analysis, in order to bring these disappeared and unacknowledged persons back to the *forum*. Families are opening up the political possibilities that reside within forensic technologies so that their disappeared can not only be discussed but identified. Without distancing themselves from their emotions, these groups are using precisely the madness of witness testimony, or the frailty of memory to acquire 'objective' knowledge⁸⁹. In fact, it is the families' embodied knowledge of their disappeared, and their geographical knowledge of their surroundings that allows them to make political claims. At my time of writing, families involved in the nongovernmental organisation Grupo VIDA have just found what might become the largest clandestine mass grave in the country to date in Coahuila, a northern state of Mexico.⁹⁰ The clandestine burial contains more than 600 bodily fragments, but authorities have not yet confirmed an exact number of victims. In Mexico, the forensic practices of citizens have challenged the role of forensic scientists in the search, location and initial identification stages of cases involving disappeared persons and clandestine mass graves. Families have made these challenges not by building state-of-the-art laboratories or certifying processes for DNA analysis (ISO9000) to strengthen their reliability. Rather, citizens have been

⁸⁹ According to Eyal Weizman, the present forensic sensibility seeks to distance itself from the frailty of witness testimony – especially that of the victims of violence, since the memories and trauma generated by violent situations seems to be marked by, and even mirror, the irrationality and madness of the perpetrator (Weizman, 2016).

⁹⁰ Personal Communication with Grupo VIDA, 11 October 2016.

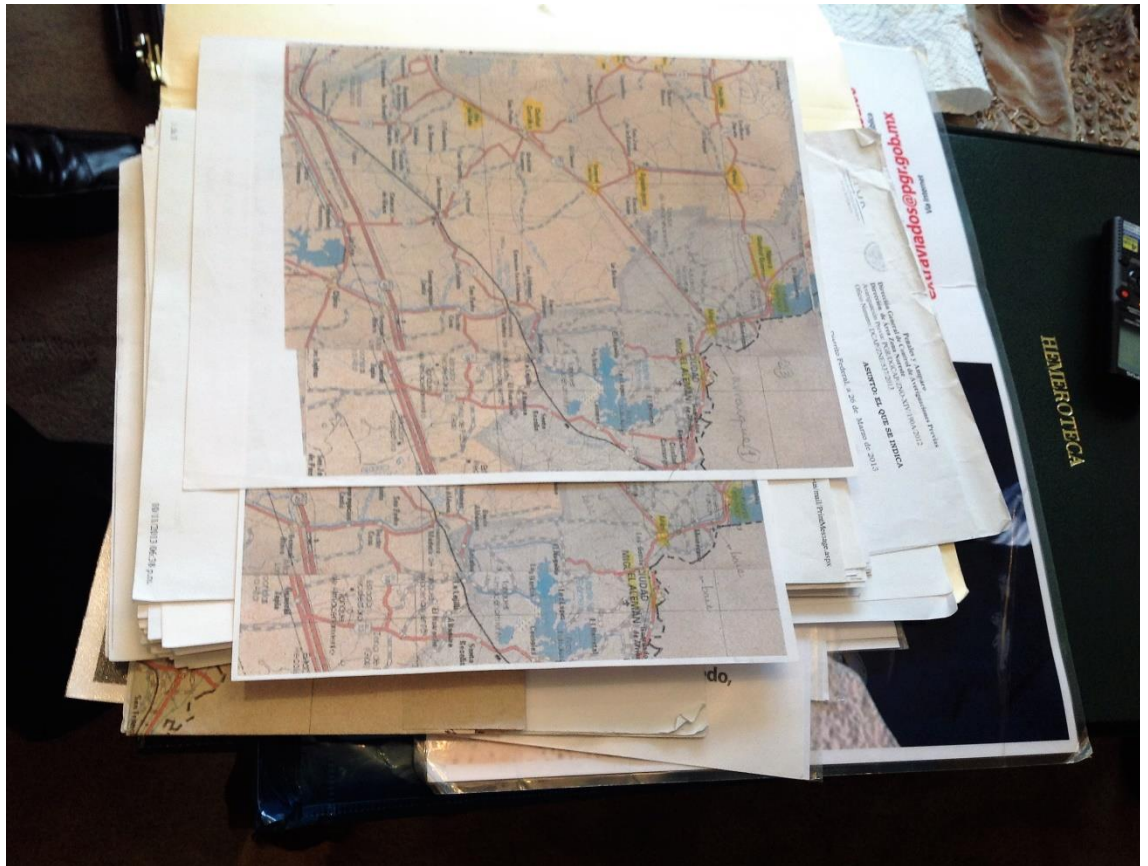
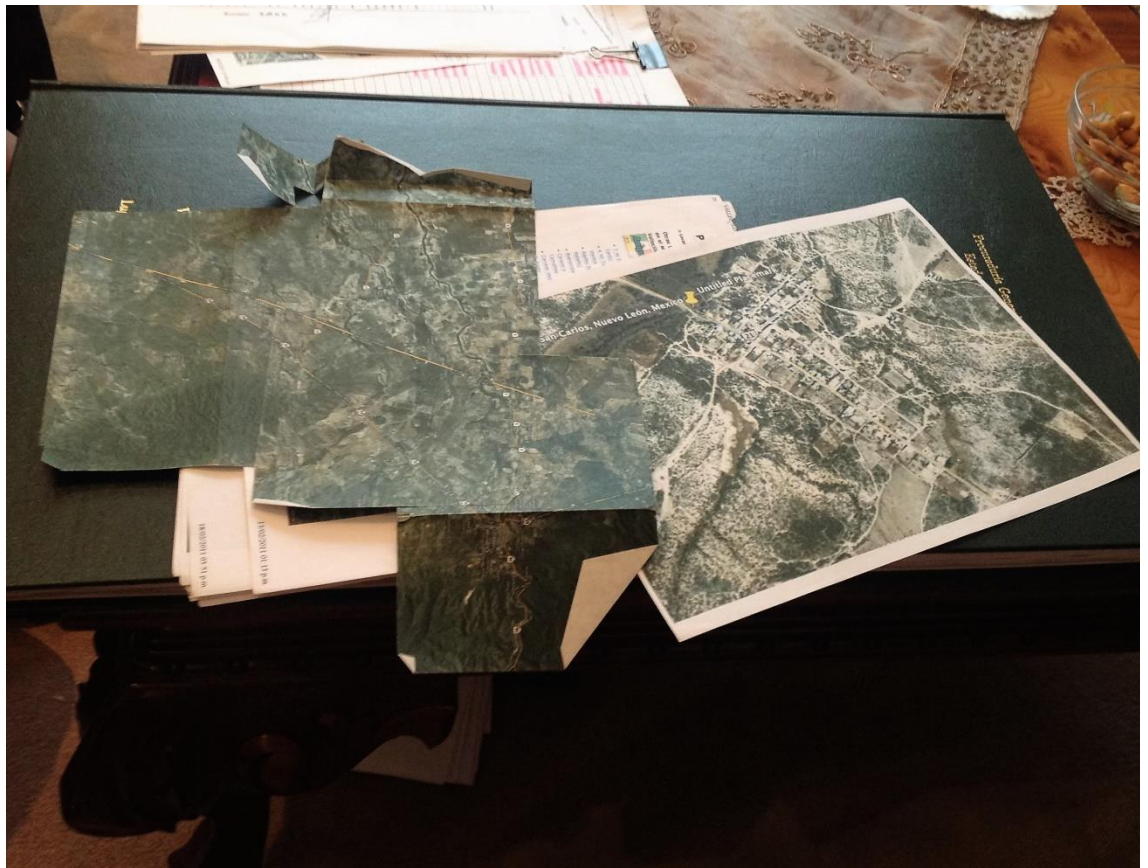
using humble technologies, such as *The List* of disappeared women in Ciudad Juárez, the *rock* that Veronica kept inside her pocket to defend herself, or the hiding away of small fragments of bones for future forensic analysis—Laura’s *collarbone*. Through the collection of forensic data, the families of disappeared persons in Mexico have opened up the possibilities for alternative modes of knowledge production that are both embodied and situated.

Interlude II

Alejandro, 36, is a Mexican systems engineer working for the transnational company IBM. He lives with his family (Mother, Father, and siblings) in an upper middle class neighbourhood in Mexico City. In January 2011 he decided to travel to the United States to visit his best friend who recently became a parent. Despite the warnings he had received from friends and family on the dangers of driving long distances alone, Alejandro decided to embark on the 1127 kilometre journey from Mexico City to Laredo, Texas. He was not only visiting his friend, but was also planning to buy a new computer—after all, as a systems engineer, Alejandro is fond of technology. On the evening of Thursday 27 January 2011, while driving his red car, Alejandro stopped at a toll booth near the town of Sabinas, Hidalgo, to pay the highway fee. It was getting late, so he sent a text message to his mother and posted his location on Foursquare: “Hi mum, I’m okay; I’m on my way, just passed the toll booth in Monterrey”, [text] at 8.20pm on 27 January.⁹¹ This was Alejandro’s last message. He never arrived at his friend’s home in Texas, and his family has been searching for him ever since⁹².

⁹¹ According to Widmer (2016, p. 62) “Foursquare is a location-based social network, created in New York City and launched in 2009. The idea behind this social network is to allow users to post ‘Check-ins’ in various locations (bars, cafes, restaurants, museums, public spaces, etc.) to inform their social network of their whereabouts”.

⁹² Interview with Alejandro’s parents, August 2014.



Chapter Five: Alejandro Alfonso Moreno Baca *On Absence*

There are infinite ways of talking about absence. The absence of a person in contemporary Mexico is generally shrouded in uncertainty, and is often associated with criminality. Since 2006, more than 150,000 people have been killed and 30,000 persons have disappeared. Not knowing the whereabouts of a person in a country that is characterised by high levels of violence, state corruption, and systematic insecurity has propelled hundreds of families to start searching for their loved ones, drawing on whatever financial, cultural and social resources they might have. Thus, their understanding of absence is shaped by their continuous engagement with the different materialities they collect and come in contact with, while searching and analysing the last movements and activities of their loved ones.

The analysis of absence in this chapter considers the ways in which a person's absence can have agency, and can even give life to a process of re-negotiated sense of identity for the absent person, as well as, those left behind, and who might be involved in search strategies (Walter, 1996; Maddrell, 2013). Following from Meyer (2012) who argues for a relational ontology of absences, in this chapter I discuss the different states of absence that relatives of disappeared persons in Mexico experience. I will do so through emphasis on families' engagement with non-linear temporalities and diverse forensic materialities. Further, I will show how the relatives of disappeared persons, in their search for their loved ones, share knowledge and spaces with other family members and their closest social networks, gradually expanding their spheres of action as they encounter national NGOs, state institutions, international agencies, and, finally, recognise and advocate for other people's absences.

Drawing on work from the field of cultural geography that emphasises the embodied experience of absence and its social and spatial dimensions (Meier *et al.*, 2013, p. 423; Meyer and Woodthorpe, 2008; Sigvardsdotter, 2012; Maddrell, 2013; Frers, 2013; Parr *et al.*, 2013, 2014, 2015), in this chapter I will analyse families' experiences of absence-presence and its embeddedness in their bodies through their everyday practices of search. Thus, experiencing absence is understood as something or someone as present, rather than something or someone being simply recalled (Meier, *et al.*, 2013). Further, I will explore the re-negotiated identities that the relatives of the disappeared acquire each time they experience the absence of their loved ones. Since absence is always relational, whenever a different category of absence emerges, the new category not only affects those left behind, but also has consequences for the understanding of the absence itself. The identity of the absent, as well as the identity of those who remain, is mutually shaped:

[...]it is the now absent [person] having continuity of presence, through the experiential and relational tension between the physical absence (not being there) and the emotional presence (a sense of still being there). [...] Absence is not merely a "presence" in and of itself, but rather the absent is evoked, made present, in and through enfolded blendings of the visual, material, haptic, aural, olfactory, emotional-affective and [...] invoking a literal sense of continued "presence", despite bodily and cognitive absence. (Maddrell, 2013, p. 505)

Maddrell explains how the absent can continue to be evoked, to have presence through distinct material and immaterial experiences. The ways in which families or the state decide to evoke an absent person have consequences in how the absence is perceived, and the claims that can be made in the public sphere. In the case of Mexico, authorities have systematically criminalised absence, or have dismissed the risks associated with absence in a country with high levels of violence. Thus, the ways in which these absences are discussed by the state and its experts in the public sphere differ from the ways in which families evoke the absences of their loved ones. There is also a political dimension to

absences. The spaces where people and things are made present matters as much as the spaces from where people and things are absent. Absences are, then, continually “negotiated and contested” (Meier *et al.*, 2013, p. 426).

Forms of landscape transformation and everyday memorialization, such as Memorial benches, domestic private shrines, painting city walls with the face of their absent kin, are examples of how absences are evoked and lived by family members (Edkins, 2011 and 2010; Maddrell, 2013). However, families in Mexico are not only engaging with these activities of remembering in order to evoke the presence of their loved ones in their everyday lives. Rather, they are creating new ways of evoking presence “in and through enfolded blendings of the visual, material, haptic, aural, olfactory and emotional-affective” (Maddrell, 2013, p. 505). For instance, families are learning by experience how to locate, trace and identify their disappeared.

Families have been collecting, analysing, and making sense of materialities and technologies. Their investigations have included the analysis of organised crime networks, geolocation, transport data, phone records, drone mapping, social media, bone fragments, statistics, songs, CCTV images, body fluids and forensic reports. The collection of this information requires mobility, and the navigation of uncertain spaces. Through mobility these groups and individuals engage in knowledge-making and knowledge-expanding processes. Following on Ingold: “Knowledge is ambulatory” (2010; 2009). We engage in knowledge making practices as we walk. Walking is, in itself, a process of thinking and knowing: “we know as we go, not before we go” (Ingold, 2010, p. 239). Thus, for families, the disappearance of one of their members is the starting point of their wayfaring practices. They will have to learn how to navigate the judicial and state security apparatus in order to evoke the presence of their absent loved one, and to imagine possible futures.

Drawing on these ideas, I argue that the particular kind of absences that are experienced in Mexico are a form of technology, and can be understood as a myriad of practices organised to produce certain outcomes. For example, as relatives of the disappeared have discovered, it might be strategic to report an absence as a kidnapping, which immediately recognises the possibility that a crime may have been committed, and, as a result, triggers police action and a search. Or, if the absent person has been missing for a significant period of time, then it might be useful to report the individual as dead in order for the family to obtain a death certificate. The capacity of an absence to travel through different spaces and to be rearranged to make particular claims is what makes it a fluid technology. A fluid technology can travel, is not too rigorously bound, is adaptable, and can change and mutate over time. A fluid absence takes on the capacity to retain continuity through transformation. And its fluidity opens up spaces for transformation and to become political.

Geographies of Absence

Studies in cultural geography have analysed absence in two forms. The first set of studies focus on hauntings and spectrality—often from a “perspective informed by Derridean deconstructionalism and spectro-politics”, and the second strand of studies relate to the “non-deconstructionist perspective that places more emphasis onto the concrete side of absence” (Meier *et al.*, 2013, p. 424). These accounts are problematic in that they consistently explain absence in opposition to presence; accordingly, absence is associated with otherness, the unknown, the immaterial, and the spectral. Frers (2013, p. 432) argues that an engagement with absence on these terms entails conceiving the inherent quality of absence as its existence beyond materiality, its embeddedness in the physical world and the body. In contrast, Frers proposes a phenomenological perspective of absence,

informed by fieldwork observations and a continuous engagement with materiality in order to argue that the experience of absence derives its peculiar power from “its embeddedness in the body, in everyday bodily practices, sensual perceptions and emotions” (2013, p. 432). In this sense, a phenomenological approach to absence “does not stop at the sign, the signified and the signifier, revolving around language and its deconstruction.” On the contrary, a phenomenological account of absence delves into the flesh, embraces uncertainty, and the pain, surprise and possibilities that open up in the corporeal field every time absences are experienced (Frers, 2013, p. 438).

Drawing on the work of geographers that understand absences as lived experience, in this chapter absence is explored not as a “thing” in itself waiting to be discovered, but rather as something that is made to exist through its relations with the world, with other people and things (Meyer, 2012). I dwell on the idea of absence as “performed, textured and materialized through relations and processes” (Meyer, 2012, p. 107). The flow of absence is understood as something that is always and necessarily both intentional and circumstantial (Anderson and Wylie, 2009; Frers, 2013). By highlighting the fluid state of an absence, absences can be conceived of as both a “trace and as something that needs to be traced” (Meyer, 2012, p. 107). Following traces is an active and spatial activity. According to Anderson and Wylie, absences “do not occur in a pre-given space and time; they produce and create space-times, fields of possibility, and waves of duration” (2009, p. 327). The presence and knowledge produced by an absence can, then, be defined in terms of movement and continuous processes rather than stasis. As Hetherington explains “the absent is only ever *moved along* and is never fully gotten rid of. Its capacity for translation remains as an absence just as much as when a presence is encountered” (Hetherington, 2004, p. 162, emphasis in the original).

Finally, as Meyer (2012, p. 108) argues, it is necessary to explore the “multiple geographies of absence but also to examine the spaces that contain absence and how

absence defies, escapes and moves within these spaces”. In an effort to make sense of a “nonlinear narrative of matters” (Anderson and Wylie, 2009, p. 327), in what follows I explore the embodied experience of Alejandro’s absence and how it escapes categories, creates its own space-times, fields of possibility, and re-negotiates identities both for him and for those left behind.

Alejandro is “Missing”

Taking the position that what it means to be “absent” is contingent and mutable, what are the implications for those who are experiencing a specific absence? Alejandro’s mother explained to me how, at the very beginning of his absence, she and her family did not know how to define or explain what had happened:

[...] we did not know what might have happened to Alejandro. We knew he was going to visit his friend in Texas, and something or someone prevented him from doing so. When my younger son told us that Alejandro was not at his friend’s house, we worried a lot. The only thing my youngest son could tell us was: “Mum, Alejandro is not there, I think he was kidnapped.”⁹³

This sense of not knowing how to explain this kind of unexpected absence is continuously experienced by the families of the disappeared. During my interviews and informal conversations with these families in Mexico, the only certainty they had was that the absence of their loved ones was out of the ordinary, and certainly not the consequence of any personal decisions. Families’ fears over the well-being of their absent kin must be understood within the context of the violence and insecurity that currently exists in Mexico. However, in other places, such as in the U.K., the absence of an adult person

⁹³ Paraphrases of informal conversations with Lucia, Alejandro’s Mother, in September 2014.

does not always immediately raises families' concerns. In the U.K., "anyone who is eighteen or older and not detained, has the legal right to go missing" (Parr *et.al.*, 2015, p. 203). The legal right to go missing allows individuals to separate from their families and close social networks to take "time out" (usually as part of a personal crisis event) or to absent themselves and start a new life somewhere else. As Payne explains:

Going missing is a social situation in which a person is absent from their accustomed network of social and personal relationships to the extent that people within that network define the absence as interfering with the performance by that person of expected social responsibilities, leading to a situation in which members of the network feel obliged to search for the missing person and may institute official procedures to identify the person as missing (1995, p. 335).

Thus, the term "missing" is often used by state institutions, NGOs and those left behind as a way to define a person's absence. Therefore to be missing is a situation in that it is attributed and relational (Parr and Fyfe, 2013; Parr and Stevenson, 2013). It is an attributed category since it needs a third party—either family, close social networks, state institutions, and in some cases international organisations, to label the person as "missing". To be "missing" is relational since, as discussed above, absences have a relational ontology: they exist in relation to others things and persons.

However, placing the agency on those 'left behind' can mean the adult missing person is labelled as a "victim", and, therefore, seen to possess little autonomy, or ability to make active "choices" (Biehal and Wade in Parr and Stevenson, 2013, p. 24). This is particularly important in cases of returned missing adults, who might feel that their agency has been denied by those who labelled them as "missing". As Parr *et al.* argue: "the act of going missing is entangled with wider meanings associated with the exercise of individual rights: the right to be in the city, free from interference by others, free from search" (Parr *et al.*, 2015, p. 203 emphasis in the original). In a study carried out by Biehal

et al. (2003, p. 2) on returned missing adults, the conceptualisation of being missing was understood on a continuum: “from an intentional break in contact, deliberately chosen by the missing person, to an unintentional break in contact, which is not of their choosing and may have been imposed by others.” What is interesting about this research is that along this continuum “people may be considered missing by others, irrespective of whether they consider themselves to be missing” (Biehal *et al.*, 2003, p. 3). In this sense, going missing is not a state-of-being, or an act of a person; it is a *situation* (Payne, 1995; Parr and Fyfe, 2013; Parr and Stevenson, 2013).

In the U.K., geography scholars have devoted research to the study of returned missing adults in order to understand absence-making processes as manifestations of agency:

Adults reported missing are absent from their daily lives, but are still *present in time and space*, and this may account for why they do not identify with the label missing. Being redefined in their absence evoked in adults a sense of loss of control, whereas terms like taking “time-out”, “getting-away” and so on allows more scope for return and less biographical disruption. [...] The experience of stigma and feelings of shame caused adults to feel distressed at being labelled as “missing”, while they themselves have a different perception of their circumstances. (Parr and Stevenson, 2013, p. 100-101, my emphasis).

As Parr and Stevenson suggest here, missing adults are present in time and space and, thus, they do not experience their own absence. This is important in terms of how these adults develop their “missing journey”: that is, how they decide to avoid, for example, security infrastructure, such as CCTV cameras or card payments as a way to remain out of sight. Therefore, even though it might be argued that labelling someone as “missing” places the agency on those left behind, an analysis of these different “missing journeys”, as experienced in the U.K., highlights how agency can also be exercised by those who are reported as missing, for instance: by rejecting the label “missing” and preferring to engage

with terms such as taking a “time-out” or “getting-away” (Parr *et al.*, 2015; Parr and Stevenson, 2013).

The ways in which absences are experienced and recorded have consequences in search strategies. If a person is reported to the police as “missing”, this might trigger police procedures to try and find the absent person, which may be not necessary in cases where the absent person has decided to “take some time out” from their close social networks. Taking into account the different geographies of absence and absence-making processes in the U.K. and Scotland, Hester Parr’s work has been crucial to the development of new definitions of being “missing” and “absent”. As a result of national, non-mandatory guidance, police forces in England and Wales have started to draw a distinction between the cases that they categorise as “missing” and those labelled as “absent”. The differences between these categories rely on the level of risks that are involved for each particular case. Thus, an “absent” person is defined as “a person who is not at a place where they are expected, or required, to be”, and in these cases officers “will not be deployed initially and the incident is monitored remotely” (ACPO, 2015, p. 5). The rationale behind this distinction is to reduce “unnecessary bureaucracy in the police service, and promote the use of professional judgement and a more proportionate approach to the management of risk” (Bayliss and Quinton, 2013, p. 8). A “missing person” is now defined as “anyone whose whereabouts cannot be established, and where the circumstances are out of character, or the context suggests the person may be subject to crime or at risk of harm to themselves or another” (ACPO, 2015, p. 5). In these cases, police officers will be immediately deployed to carry out search and investigation processes.

The different degrees of risk that mediate an absence respond to a spatial-temporal understanding of the situation of each disappearance. Examining spaces where absences occur open up possibilities for analysing the ways in which the relational ontology of absence transforms not only families’ responses to absence, but also changes to the

identity of the absent person themselves. Being absent in the U.K., where 90% of missing persons cases are resolved within a week (Tarling and Burrows, 2004; Parr and Stevenson, 2013), does not entail the same risks as being absent in Mexico, where statistics and data on absent or “not located” persons is limited, lacks credibility, or is non-existent.⁹⁴ The responsibility for collecting statistics on missing persons resides within state institutions, either the local police or other federal institution that have the capacity to deploy search strategies. However, there are instances where the recording of such “absent events” is not a priority for the state, since it may highlight high levels of violence in an area or failed police interventions.

In the case of Mexico, the high levels of “missing” or “non-located” person’s reports were noticed by non-governmental organisations, prompting, once more, a visit from the United Nations High Commissioner for Human Rights in 2015. After his visit, the commissioner confirmed the rising levels of violence and generalised state of impunity, and, in his report, described a country where 98% of all crimes remain unsolved, with the great majority never properly investigated (UN, 2015):

For a country that is not engaged in a conflict, the estimated figures are simply staggering: 151,233 people killed between December 2006 and August 2015, including thousands of transiting migrants. There are at least 26,000 people missing, many believed to be a result of enforced disappearances since 2007. Thousands of women and girls are sexually assaulted, or become victims of the crime of femicide. And hardly anyone is convicted for the above crimes. [...] Many enforced disappearances, acts of torture and extra-judicial killings are alleged to have been carried out by federal, state and municipal authorities, including the police and some segments of the army, either acting in their own interests or in collusion with organized criminal groups [...].

⁹⁴ According to Hester’s Parr research “the majority (54%) of adults returned or were located within forty-eight hours, and 24% were missing between forty-eight hours and seven days, with only a minority outstanding for several weeks”(Parr et.al., 2015, p. 201).

The High Commissioner's description illustrates why there is generalised lack of trust in the police and the criminal justice system. It shows a country where, if you are the victim of a crime, the last people you would call for support are the police (UN, 2015). Moreover, criminalisation or victim blaming is a common occurrence in Mexico. Not only does this cast aspersions on the victims and their families, but it also reduces the likelihood of investigations into these cases being taken seriously (Ruse, 2015). The criminalisation of absence also creates a scenario in which many people in Mexico consider themselves to be distanced from the insecurity and violence since "it only occurs amongst 'lower-class criminals'" (Ruse, 2015, p. 8).

As explained by Lucia:

[...] Look, they are innocent, they are innocent victims...It is not what they have explained to us, that those who were disappearing or being killed were only criminals. [...] before this tragedy happened to us, before it changed our lives, I, like many other people watched the news about the violence in my country, and I even got angry seeing so much violence on the TV. I was the first to say "I am not going to watch the news anymore"—what a silly thought! As if what the TV shows us was happening in other country...and that is the way all us Mexicans are—those that have not lived my tragedy. As a matter of fact, we suffer the criminalisation; even our own friends start to distance themselves from us due to fear...our bad luck could be contagious. We live like ostriches (Interview with Lucia, August 2014).⁹⁵

In Mexico family members have been asked to wait at least 72 hours to report someone as "lost" or "not located". This is not the case for missing children: under the age of eighteen there is a search protocol, the 'Amber Alert' that is implemented immediately in order to locate the missing child. However, even in high-risk cases, authorities have failed

⁹⁵ 'Like ostriches that bury their head in the sand'. This is a common metaphor used when "people are refusing to acknowledge advice or in denial about their situation, hoping that by denying the existence of a problem, it will go away."

to provide adequate responses to child disappearances, especially in cases involving missing teenage-girls.⁹⁶

As the days passed without information of his whereabouts, Alejandro's family suspected he must have been the victim of a kidnapping. Alejandro's family took a 1 hour and 45 minute flight to Nuevo Leon, in the northern part of Mexico, to reach the location where Alejandro's last call to the family home was made. When they reported Alejandro's absence to the local police station, the officers repeatedly told them 'Don't worry ma'am, they will give you your son back in three months. As for the vehicle [he was driving], you'll find it later on one of the nearby *ranchos*'. (Interview with Lucia, August 2014). Listening to these comments from the local authorities gave Lucia and Don Alfonso⁹⁷ hope that Alejandro might return home soon. But days and weeks passed, and no one called. Without a ransom call or any kind of rescue negotiation between the family and the kidnappers, authorities would not start a criminal investigation. Alejandro's family realised that the decentralized nature of search and location processes in Mexico, the apparent collusion between organised crime and local authorities, as well as the lack of security and state control in some spaces, would make it impossible for local and federal authorities to account for their son's absence. Thus, the family decided that they needed to start their own search for Alejandro.

⁹⁶ For an example on this see the Inter-American Court on Human Rights' resolution on the 'Cotton field' case, where the Mexican government was found responsible for the crime through their lack of protection of civilians and their lack of due diligence in the investigation of the homicide of three female victims (two of whom were minors) who were found in a cotton field in Ciudad Juárez on November 6, 2001. http://www.corteidh.or.cr/docs/casos/articulos/seriec_205_ing.pdf (Accessed: January 2016).

⁹⁷ The word *Don* is a prefix used in Spanish to denote respect to a male forename. That was the way I always addressed Don Alfonso during the multiple conversations I had with him.

Tracing Alejandro's absence

Searching is always a geographical endeavour. An absence is “to be ‘placed’ and ‘traced’, and it is through traces that absence comes to matter” (Meier, 2013, p. 109). Collecting traces is one of the main activities for families attempting to locate their loved ones. For a country like Mexico, which has witnessed an increase in rates of violence throughout its territory, using social media and leaving traces for security purposes have become a regular practice.

For his parents, Alejandro's decision to send regular updates on his journey, and to share his location on Foursquare and other social media apps was his way of remaining safe. In fact, one of Alejandro's last text messages to his brother informed him that he had just been stopped at a checkpoint while driving on a highway in the northeast of Mexico:

“I just passed a check point in Matehuala [Northern part of Mexico].”
“C'mon bro, stay focused you need to learn how to drive well.”⁹⁸

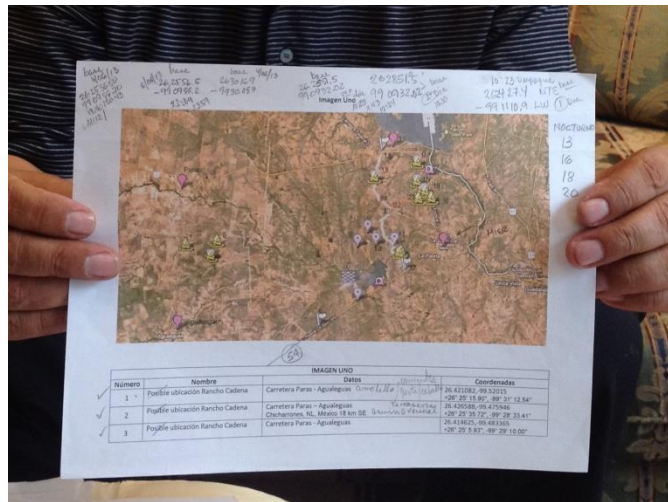
Ensuring safety of movement as individuals and things pass through a country's internal and external borders is central to governmental security practices (Amoore and De Goede, 2008a and 2008). The control of major highways for the provision of public services, as well as ability to “differentiate the bodies that must wait, stop, pass or turn back”, is an essential part of ensuring security, and the state's monopoly on the use of force (Amoore and Hall, 2010, p. 302; Grillo, 2014). However, with the escalation in cartel-related violence since 2008, criminal organisations have adopted the government's own practices and have begun to install their own checkpoints, particularly in the Northeast of Mexico. Checkpoints have been regularly set up by criminal organisations

⁹⁸ Interview with Lucia and Don Alfonso, August 2014.

in strategic zones in order to secure the transportation of narcotics or other illegal items (Grillo, 2014).

Gunmen linked to cartels run impromptu checkpoints or hold up cars as part of their efforts to control territory. The criminals operate at night and even in broad daylight, sometimes in civilian clothes and sometimes in military garb. [...] In many cases, the criminal groups simply want to know who is passing through the area. They ask for papers or check trunks. In other places, they want to charge people for the right of passage. In the worst-case scenario, they are looking to steal vehicles or kidnap the passengers. It is like playing Russian roulette: If you are stopped, you don't know if it will be a scare or lead to your abduction. (Grillo, 2014).

These practices highlight the Mexican government's lack of control in certain quarters. These vulnerabilities led to the launch of a new strategy in May 2014 to secure territories and highways in industrialized areas close to the U.S. border (Grillo, 2014). During one of our conversations, Lucia and Don Alfonso suggested that Alejandro may have encountered yet another checkpoint after passing the toll booth in Sabinas Hidalgo. Both are convinced that Alejandro used an application on his mobile phone to pinpoint the exact location where he felt threatened. Don Alfonso believes that Alejandro voluntarily left this trace for him to follow:



Alejandro, Alejandro he has my genes... Alejandro as an engineer knew how to send a message, a coordinate... *He knows me*... He knew I wouldn't leave the area... I never wanted to leave *that* area... and my wife is always asking me 'what if Alejandro made it all the way to Nuevo Laredo?'⁹⁹... But he never did! *Never!!!*... He didn't reach Nuevo Laredo, and I am telling you why!... I always repeat this to the authorities, because they wanted to move our case file to Tamaulipas,¹⁰⁰ but I'm telling you: my son never made it to Nuevo Laredo. If my son had seen that the silhouette [the interstate boundary] of Nuevo Laredo was only 20 or 30 kilometres away, he would have phoned his friend, or would have used Facebook or other apps, just as he was using them [along his journey], to let us know where he was. [...]

This digital trace, recorded as a coordinate on a map, has become the point from which Don Alfonso and Lucia have invested all of their search efforts. As Don Alfonso explained: "I based my search in this specific region. I regionalised [my efforts]." In the aftermath of Alejandro's disappearance, the two deployed a set of strategies to find him. They searched nearby hospitals, local police stations and prisons, but did not find anything. The only trace that furthered their investigation was the grainy footage of a

⁹⁹ Nuevo Laredo is a border city located in the state of Tamaulipas, across from the U.S. city of Laredo, Texas. The last time Alejandro was seen, he was driving from Sabinas Hidalgo, Nuevo Leon, towards Nuevo Laredo, Tamaulipas. Don Alfonso believes that Alejandro never crossed the interstate border between the states of Nuevo Leon and Tamaulipas. Therefore, the case file and search efforts from authorities and family members have been limited to Nuevo Leon.

¹⁰⁰ Tamaulipas is a state located in the Northeast of Mexico. Since early 2010, its rates of violence have dramatically escalated to the point that it is now considered to be one of the deadliest cities in Mexico.

security camera photo taken when Alejandro paid for the highway fee in the toll booth in Sabinas Hidalgo. He paid in cash and continued his journey, but soon afterwards, all traces of Alejandro vanished. While talking to the staff who gave them access to the photo, Don Alfonso and Lucia discovered that Alejandro's disappearance was not an isolated incident. There were at least other ten cases of people who vanished after crossing the same toll booth just in that month. In all of these cases, the families did not receive a ransom call, or any information that suggested that their loved ones had been abducted.

Hester Parr's work on the accounts of returned missing adults in the U.K., and the analysis of both "missing experiences" and "missing situations", shows that "being missing is usually highly individualised and short in duration, maybe involving performative attempts to 'hide' or 'escape' from others" (Parr, *et.al.*, 2015, p. 194).¹⁰¹ Thus, missing persons often decide to stay away from CCTV cameras, avoid public transport, urban surveillance and use buildings and natural environments as key strategies to hide and avoid identification. Missing adults "navigate" through known spaces in order to "blend in and not appear out of place or lost" (Parr, *et.al.*, 2015, p. 198) In this sense, "missing performances" are often local, and tend to be carried out by individuals consciously, but with uncertain ideas of what to do or where to hide (Parr, *et.al.* 2015).

In contrast, young adults in Mexico are using the same technologies to remain visible and safe, for instance: making themselves easily detectable on CCTV cameras, using location based apps, sending messages throughout journeys. Furthermore, families experiencing the unexplained absence of a loved one are re-appropriating these traces not only to find them and bring them back home, but to disrupt the public sphere and challenge state truths by creating spaces for absent persons to be visible, discussed and acknowledged. It is the

¹⁰¹ 'Missing situations' is a phrase that seeks to convey the different people and processes that may be involved once a human absence is noted. For a detailed explanation see Payne 1995 and Parr, *et.al.* 2015, p.193). According to Hester Parr, a 'missing experience' is the complex array of experiences lived by people related to those who have gone missing (Parr, *et.al.* 2015, p. 193)

gathering of information from mobile technologies, state surveillance and disciplinary apparatuses (such as prison records, mental health files, and images from CCTV cameras) that make it possible for families to establish a “starting point” for their forensic work.

Forensic research is greatly informed by the analysis of traces. Traces are “marks, residues or remnants left in place by cultural life” (Anderson, 2009, p. 5), and are commonly conceived of as material, well defined, rigorously bound objects with a stable identity, but can also be immaterial or with fluid and moving boundaries. As traces are constantly produced, they influence the meanings and identities of people and places. They “become dynamic entities [...] that are in constant transition as new traces react with existing or older ones” (Anderson, 2009, p. 5). Thus, they can be bound to specific temporalities, but can also be seen as disruptive, or travelling through different spatial-temporalities.

Mobile people and things leave traces from the minutiae of everyday life, such as grocery shopping records, patterns of past travel, credit card purchases, and retail preferences, to name but a few. These traces can be conceived of as transaction data: “way of mapping, visualising, and recognising bodies in movement” (Amoore and de Goede, 2008, p. 176).

Indeed, as Louise Amoore and Marieke de Goede point out that:

[...] the etymology of *transaction*, with its root in *trans* (through) and *agere* (to drive), and in the Latin *transactio* (an agreement), speaks to the authorisation of a crossing or passing through. [...] Transactions data, then, are imagined as a means of both freeing up mobile people in global cities, at airports or land border crossings, and securing and verifying their identity and credibility (2008, p. 175).

The collection and analysis of these transactions — traces of everyday life — has become central to security practice. First, because these transactions can be seen to anchor identity, providing a complete picture of a person, and, second, for national security purposes as these data seem to ground “informal and unstructured” terrorist networks (Amoore and de

Goede, 2008, p. 177). As Amoore and de Goede point out, drawing on private commercial techniques and expertise in state security is not a new practice; the use of risk scores and the identification of risk-differential dangers has been deployed and analysed elsewhere (Amoore and de Goede, 2008a). However, transaction data is of further significance in that security “decisions are made on the basis of a risk analysis that ‘foresees’.” That is to say: the analysis of this ‘electronic footprint’ is used to “identify a suspicious body in movement and, most importantly, to verify or deny access *in advance*” (Amoore and de Goede, 2008, p. 176, emphasis in the original).

Therefore, the analysis of transaction data blends the future into the present. Transaction data has created new spaces of governing in the face of an uncertain future. This creates a context where pre-emptive security decisions can be made according to an ‘electronic footprint’, for instance: prohibiting an individual from boarding a train, a flight or crossing a border—all actions made on the basis of possible futures. In other words, when the analysis of mundane transaction data is made actionable, a “barely visible form of violence in the war on terror” takes place (Amoore and de Goede, 2008, p. 182). An analysis of transaction data is relevant for the questions raised by this thesis in that it enables the delineation of the spaces and possibilities that ‘open up’ when practices of data collection and analysis cease to be an exclusive prerogative of the state, and become part of the everyday knowledge of families searching for an absent person. If transactions data is analysed not only as part of a security strategy for freeing up mobile bodies and ensuring circulation, but rather as part of a citizen strategy to find a loved one amidst the absence of knowledge in an uncertain scenario, then, we gain the ability to render visible spaces where a different kind of politics and security decisions are made. For instance, families’ ability to imagine possible scenarios, to explain Alejandro’s absence as a consequence of a kidnapping, insecurity, and forced labour is a way to act and decide

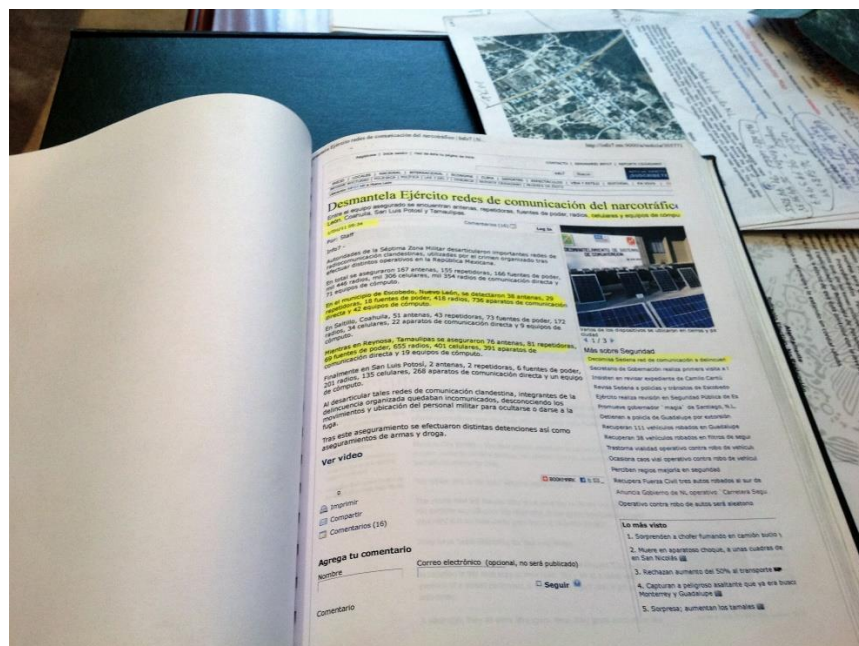
“precisely on the basis of an absence or an unknown, on the basis of that which can never be captured” (Amoore and de Goede, 2008, p. 179).

Citizens’ analysis of transaction data helps to decide where to search, and how to see. In short, this citizen practice makes visible those places that the materiality of a corrupt state would otherwise conceal and keep hidden from the eye of the uninitiated.¹⁰² State identification and tracking systems, contrary to what Edkins (2011) and Parr *et al.* (2015) argue, are *necessary* for the families of disappeared persons. It is precisely through the use of governance apparatuses that the individual presences of those who are absent are acknowledged and retained.

Similar to data-integration techniques which are part of the state’s security practice, it is important for families to establish the identity of the absent person partly through their social embedding (Amoore and de Goede, 2008). As one of Alejandro’s posters read: *‘Honourable family is looking for an IBM systems engineer’*. For his family it was important to make clear that his absence should not be criminalised and, further, that Alejandro’s identity as a well-educated, systems engineer working for an international computer hardware company was relevant in order to understand his absence. As one national security officer explained to Don Alfonso in early 2012, a year after Alejandro’s disappearance, Alejandro’s case was the first case he had come across involving a missing engineer. Since then, however, there have been fifty-two cases involving missing engineers from within the same area (the Northeast of Mexico).

¹⁰² Sara Widmer (2014, p. 64) uses the phrase “The application [foursquare] makes visible those places that the materiality of the city would otherwise keep hidden from the eye of the uninitiated” in order to reflect on the capabilities of mobile applications such as Foursquare, to make visible those spaces (i.e. restaurants, bars, coffee shops, libraries, etc.) that would not be visible for those who are not engaging with this kind of digital technology.

While explaining this to me, Don Alfonso takes one of the newspaper articles that are part of the archive that he has produced through his research and data-gathering practices.



The headline reads ‘Mexican army takes down organised crime communication network’. Using the newspaper article as a prompt, he explains that, ten months after Alejandro’s disappearance, the army found a communication network used by the organised crime. The network covered the area of Nuevo Leon, Tamaulipas, and San Luis Potosi, three states located in the Northeast of Mexico—the same area where Alejandro disappeared. It is believed, by Alejandro’s family as well as other journalists and independent researchers, that the disappearances of high-qualified engineers and network technicians can be explained as part of a strategy led by organised criminals seeking to kidnap and enslave qualified professionals for the construction of parallel (and private) networks of communication. In other registered cases, young professionals vanished from highways while carrying out their jobs, and no ransom call was made afterwards.

As Don Alfonso explained to me:

When we were doing our research, talking to other families...we realised that no ransom demands were made for the people that disappeared the 21st of January, the other cases from the 27th, we knew

about the case of 'X' from December 2010. *No one* asked them for money. We got to know their parents, and there was no evidence of a ransom call. Here, we are not talking about a kidnapping. These are cases of involuntary disappearances in which, we are almost certain, a local authority was involved. As for our son, there is high probability that federal police officers were involved in his disappearance.

The search for Alejandro led his family to learn about other cases of disappearances occurring in the same area where his mobile phone last emitted a signal. Tracing and placing an absence can never be achieved in isolation. As noted before, an absence can only be explained in relation to other people and things. Alejandro's parents gradually realised that their search for their son implied a search for other absent persons.

Being absent with others

Movement gives us the possibility to recognise ourselves in others. It is through being moved by the proximity of others, by the emotions left by others, that we create attachments, decipher ourselves and become part of a collective (Ahmed, 2004, p. 27).

On the 28 March 2011, seven bodies were found inside a car in Temixco, a small town in the state of Morelos, south of Mexico City. One of the bodies recovered was that of 24 year old Juan Francisco Sicilia Ortega, the son of Javier Sicilia, a prominent Mexican poet, novelist and journalist. The murder of Juan Francisco and six of his friends received widespread media coverage. The coverage of this case showed to the country that such violence is not restricted to the northern part of the country (which is, according to authorities, the turf for drug related violence). With other states and the 'upper middle class' affected, nobody could consider themselves safe from violence. Around two weeks after his son's murder, Francisco Sicilia organised a protest on the streets of Cuernavaca,

Morelos, and published an open letter to “Mexico’s Politicians and Criminals” in *Proceso* (2011), a political magazine with national distribution. Sicilia wrote:

We have had it up to here with you politicians [...] because in your power struggle, you have torn the social tissue of this nation. Because in the middle of this war, which is badly designed, badly made and badly conducted, in the middle of this war that has thrown the country into a state of emergency, you have been unable [...] to create the consensus needed by our nation to find unity, and without unity this country has no way out (Sicilia, 2011, unpaginated).

Sicilia called for a “movement of national unity” and from that moment until 2014, he led one of the most important civil society movements, the ‘Movement for Peace with Justice and Dignity in Mexico’ (*Movimiento por la Paz con Justicia y Dignidad en Mexico: MPJD*). Sicilia conducted several caravans within Mexico and in the U.S. in order to raise the visibility of the victims of violence in Mexico (including those who had disappeared), and called on politicians in both sides of the border to rethink their strategy towards the ‘War on Drugs’.

Sicilia’s pledge was echoed by thousands of middle class Mexicans who were too afraid to speak out and acknowledge that their family member had been absent for several months, or even years because of the discourses of criminality (instigated by the state) surrounding the disappeared. Alejandro’s parents joined Sicilia’s movement and soon became pillars of the organisation. They walked together with Sicilia and 100,000 protestors in the caravan organised from Cuernavaca, Morelos (Southern part of Mexico) to Mexico City, and took part in the ‘Caravan to the North’ (Scholl, 2015) that crossed national boundaries as the group walked all the way from Cuernavaca to Washington, D.C. in the U.S.

Lucia explained the caravans in our interview:

We knew about disappearances going on in Mexico, but we never thought it would happen to us. We used to see all these marches and public demonstrations with mothers demanding [justice and accountability] for their sons and daughters, and we used to get mad at them, because they were causing traffic jams all over the city. But now we understand them, now we are the ones walking and shouting amongst them... (Personal Interview, August 2014).

Caravans proved to be an effective mobilisation strategy that highlighted disappearances, homicides and the rising levels of violence within the country for the wider population. During the caravans, members of the MPJD “started to collect and document personal stories in which state officials were partially to blame for forced disappearances or murders. Building [initially] 291 cases in which relatives were generally left without recourse to prosecute before state institutions” (Scholl, 2015, pp. 4-5). Raising visibility and documenting the violence experienced in Mexico was, perhaps, not the main success of the caravans but rather the *political space* created while walking and moving along with others.

Tim Ingold draws a distinction between wayfaring and transport in his discussion of “the relation between becoming knowledgeable, walking along, and the experience of weather” (2010, p. S121). To “transport”, according to Ingold, one must move from point “A” to point “B” and, in order to do so, one must plan ahead: thus, transport becomes a means to an end. “What happens along the way is of no consequence, and is banished from memory or conscious awareness” (2010, p. S127) Meanwhile, a wayfarer is a “being who [...] negotiates or improvises a passage as he goes *along*” (2010, p. S126). The wayfarer “has to continually attend to his path, adjusting or ‘fine-tuning’ his movement as the journey unfolds” (2010, p. S130) The main concern for the wayfarer is “to seek a way through: not to reach a specific destination or terminus but to keep on going” (2010, p. S126). Ingold’s figure of the “wayfarer” is comparable to the families in Mexico who

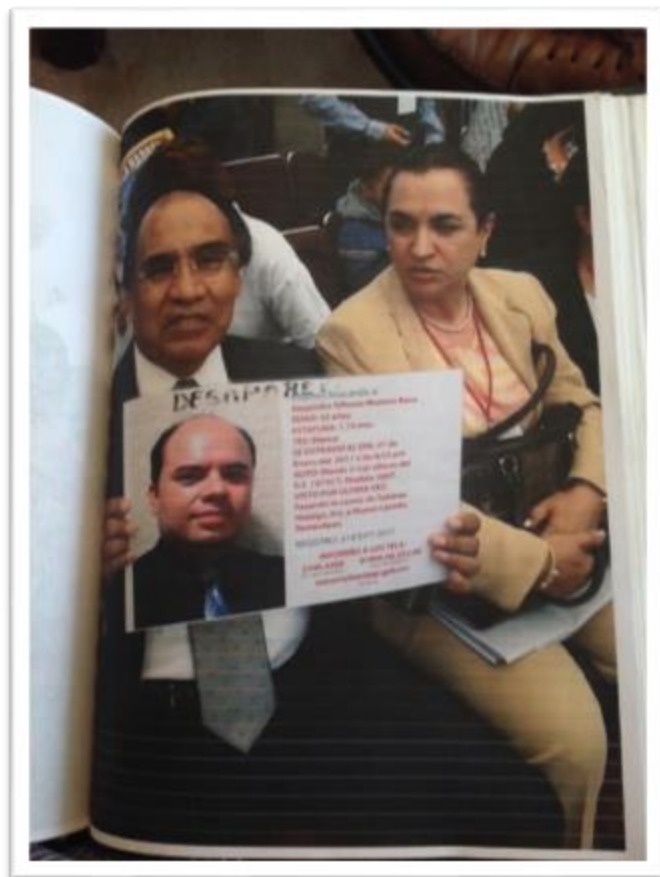
are searching for their loved ones. My analysis of citizens' practices of search and data collection recognises that these processes are embedded in movement. This is not to say that the movement is ancillary to knowing but, rather, that "moving *is* knowing" (Ingold, 2010, p. 134). The wayfarers, as well as the families of those who have disappeared, know as they *go along*.

The idea of movement as knowledge is relevant for the political spaces that have been produced in order for the disappeared to have presence, as in the example of the caravans. While searching, collecting data and researching other cases of disappearances, families are continuously re-negotiating their identities, and the identities of the absent. For Lucia and Don Alfonso, walking along "fine-tuned" their understanding of Alejandro's absence, furthering their investigations in practical terms, for instance, by learning that not only Alejandro but more people had disappeared from the same highway.

In wayfaring things are instantiated in the world as their paths of movements, not as objects located in space. They are their stories. Here it is the movement itself that counts, not the destinations it connects (Ingold, 2009, p. 204)

In short, the integration of knowledge about something or someone does not 'build up' but grows 'along' the paths that people take from place to place, within the matrix of their travelling (Ingold, 2009, p. 199). In citizens' search practices, it is easy to spot *movement*. There is the movement of bodies (e.g. families travelling around the country looking for their loved ones), data (the information gathered that is sometimes shared with the police so the state can start an official search), and of traces (the information left behind by those who are absent). But what is interesting here is the way in which this composite of information is presented in different spaces and re-arranged to imagine possible futures and to tell different stories that, in some cases, challenge the states' official narrative that denies the existence of thousands of disappeared persons in the country.

[Cruz-Santiago Field notes, August 2014] – Don Alfonso is showing me his archive on Alejandro’s case. There are several books that he has made containing not only details of the judicial case, but clippings from hundreds of newspaper articles, photos, maps and satellite images of the different places where searches for Alejandro were conducted. In one picture Don Alfonso and Lucia can be seen holding a poster with Alejandro’s personal details while they were visiting the U.S. as part of the Caravan. The photograph they were holding looked different. I asked Lucia why the word “Disappeared” was written by hand on Alejandro’s photograph, in the same place where, in other pictures, it had read “Lost”.



My husband wrote “Lost” on all of Alejandro’s photos... and there [while in the Caravan] I found out that “Lost” was one thing, and that “Disappeared” was something different...I mean, I’ve been learning a lot, we have all been learning [...] A “Lost” person is someone who has just left, or they have had a moment, of...of...memory loss...I mean, yes, because there were other events [for their absence to be

explained]...meanwhile “Disappeared” has a different [political] weight...we learnt about this in a talk they gave us... [it] is like now that the government is using the phrase “Not Located”!!...because I mean, that was not his will...he disappeared...Being “Lost” can mean that you wanted it...I mean, at the beginning he was missing, but after all the searches we have done, we now know that there is a different legal connotation between being “Lost” and “Disappeared” (Interview with Lucia, August 2014).

Being aware of the political implications of using the words “Lost”, “Not Located” or “Disappeared” was one of the main things that Lucia and Don Alfonso have learnt in all these years of searching. Lucia explains how while walking to the U.S., and through listening to other families with disappeared sons and daughters, she realised that Alejandro’s case did not exist in isolation. There were hundreds, even thousands of mothers looking for their offspring. Initially it was important to let the authorities in Mexico, the U.S. and the rest of the world know that Alejandro had disappeared, but also to show that the knowledge they have gathered could be useful to challenge the state’s narrative of events. And, if the state did not search for their absent loved ones, they would.

In her analysis of undocumentedness in Sweden, Erika Sigvardsdotter (2012, p. 526) draws on Hannah Arendt’s ideas of the spatial dimension of political action to argue that public space is not material, but is socially defined and performed by members of the political community acting together. However, for undocumented people in Sweden, there is no opportunity to “appear, act, speak up or claim rights” in the public space, since they live hidden from public view (Sigvardsdotter, 2012, p. 526). Undocumented persons are discussed and make appearances in public life as a community, in the plural. This indicates the “impossibility for undocumented individuals to be visible as individuals: only a joint, anonymous presence is possible” (Sigvardsdotter, 2012, p. 533). This is analogous to disappeared persons in Mexico; the *disappeared* are present in public debates as a group. Lucia and Don Alfonso learnt about the political possibilities that

mobilising Alejandro's absence as a disappearance can bring forth. Through the analysis and collection of traces and their continuous *being with others*, relatives of the disappeared create new forums for political engagement. In these new forums absent loved ones can be present, accounted for, and acknowledged as both, individuals and as part of a collective: the *Disappeared*.

Although one cannot listen to the voices of the thousands of disappeared persons in Mexico, one can argue that the identities of disappeared persons are continuously changing through their families' experiences of search, and the knowledge gained throughout years of searching. For the disappeared, there is no chance to claim back their being in space and time. There is no "experience of stigma and feelings of shame" that could allow them to deny being labelled as "disappeared". They exist in space and time through the memories and actions of others. And, it is through this communal activity that the families of disappeared persons render visible their absent loved ones in the public sphere.

Attending to the spatial politics that absences create and are created by calls for a deeper understanding of the publics that are mobilising those absences (Parr and Fyfe, 2013, p. 634). For instance, in places like the U.K., missing absence is largely a private, and perhaps, "unpolitical affair" (Parr and Fyfe, 2013, p. 634). Most of the "missing experiences" explored by Parr *et al.* are individual journeys made by adults that decide to absent themselves, often temporarily, from their everyday lives. There is, though, as Parr and Fyfe point out "no analysis of the broader geographies of inequalities that may structure a missing crisis" (Parr and Fyfe, 2012, p. 616). However, being absent in Mexico calls for a different way of making sense of what is not there. It implies more than just the private and – largely – unpolitical affair of being missing, as described by Parr, *et al.* (2014). Being absent in Mexico is being absent *with others*. The *disappeared* can only be understood as a collective category that articulates thousands of stories of absence and

the lack of rule of law that accompanies most of them. According to Hetherington (2004, p. 159), absence can have just as much of an effect upon relations as recognisable forms of presence. Social relations exist not only around what is, but also around the presence of what is not.

The ways in which families collect data on the disappeared have political implications. This runs contrary to the idea that “prevalent forms of political or bio-political governance both objectifies and instrumentalises the person, and in doing so – certain bodies like illegal immigrants, families of victims– appeared to be ‘missing from politics’” (Edkins, 2011, p. viii). What I want to show is how numbers and bureaucratic practices do not deny our uniqueness and irreplaceability, but, rather, they open up possibilities to pursue the political capacities that reside within the technologies themselves.

Absence as fluid technology

The social inhabits multiple topologies. There’s one that is regional and homogeneous, which distinguishes its objects by talking of territories and setting boundaries between areas. There’s another that comes in the form of networks, where similarities have to do with syntactical stability and differences reflect grammatical dissimilarity. But there are others too, and one of them is fluid. For there are social objects which exist in, draw upon and recursively form fluid spaces that are defined by liquid continuity. Sometimes fluid spaces perform sharp boundaries. But sometimes they do not – though one object gives way to another. So there are mixtures and gradients. And inside these mixtures everything informs everything else – the world doesn’t collapse if some things suddenly fail to appear. (Mol and Law, 1994, p. 659.)

Annemarie Mol and John Law (1994) reflect on the objects that emerge in socially fluid spaces. For instance, they analyse “anaemia” and how this condition unsettles spatial securities. Doctors may diagnose anaemia by observing a low level of haemoglobin when looking at a patient’s eyelid; noting how a patient gasps for breath or if her conjunctiva is

white. Anaemia “flows” through the diagnostic skills of the doctor, as a written number, or through the use of certain medical devices, but in all this fluidity “anaemia” stays the same even as it transforms “itself from one arrangement into another without discontinuity” (Mol and Law, 1994, p. 664). Annemarie Mol coined the composite term “ontological politics” to suggest that reality “does not precede the mundane practices in which we interact with it, but is rather shaped within these practices” (Mol, 1999, p.75). In short, the conditions of possibility are not given, hence the use of the term *ontologies*, in plural. “Reality” is not out there waiting to be discovered and described, but rather emerges and is shaped within everyday mundane practices. According to Mol, reality is done, enacted and hence *multiple*. The term *politics* is used to emphasise the “active mode” of reality, the “process[es] of shaping, and the fact that its character is both open and contested” (Mol, 1999, p. 75).

The term *ontological politics* “suggests a link between the real, the conditions of possibility we live with, and the political” (Mol, 1999, p. 86). However, as Mol interrogates, “what kind of politics might fit this ontological multiplicity?” In this chapter, I described the kind of politics that an ontological multiplicity brings forth. I have done so by delineating the different states of absence that Alejandro encompasses, and how each of these states have had some impact in the way Alejandro’s absence is perceived and experienced by his family. Through analysing Alejandro’s story, I have studied the socially fluid space that citizens inhabit when their loved ones are absent. I have argued that notions of and families’ reactions to Alejandro’s absence differ from individual missing experiences, and from other kinds of collective absences that, while unexpected, can somehow be explained, for example: missing persons cases after natural disasters, or the unexpected deaths of almost 3,000 persons after the 9/11 attacks in New York, or missing persons cases after the July 7 bombings in London in 2005.

Avril Maddrell (2013, p. 505) has argued that death is the ultimate absence. Hester Parr *et al.* have engaged with the complexities of returned missing adults that, though absent from their regular social networks, did not experience their own “missingness” (Parr *et al.*, 2012, 2013, 2014, 2016). In contrast, this thesis examines a different kind of absence, produced by an unexpected event that occurs in ambiguous and violent circumstances and, in most cases, persists. These absences are understood not in terms of what is not there, but what can be anywhere, dead or alive. Experiencing this kind of absence defies, escapes and flows in its attempts of being bounded: it is a *fluid* absence.

Annemarie Mol has long argued for the multiplicity and fluidity of an object. For Mol “there are not just many ways of knowing ‘an object’ but rather, many ways of practising it. Each form of “practising” — performing, doing, and enacting — gives a different version of the object. Hence, it is not a single object, but is more than one: “An object multiple” (2014, unpaginated). Thus if we consider that reality is multiple, emphasis is placed on how reality is “*done* and *enacted* rather than observed” (Mol, 1999, p. 77). Multiplicity entails that the different performances of an object “*may collaborate* and even *depend on* one another” (Mol, 1999, p. 83), even though these distinct realities may clash. In this case, Alejandro’s absence cannot simply be explained as a kidnapping or a deliberative decision to take some “time out”. It is more complex. Alejandro’s absence takes on the capacity to retain continuity through transformation (De Laet and Mol, 2000). His absence does not follow the clear-cut or fixed categories that local governments, federal institutions and international laws use to explain what is happening in Mexico.¹⁰³

¹⁰³ For example in Mexico the government refers to these absences as ‘Not Located’ persons. This entails an assumption that the person might be somewhere else, but is not necessarily in danger. For example, they might have decided to move to the north part of the country to cross the border with the U.S. to work there, or they might have decided to move away from their close social network. Furthermore, in Mexico ‘disappearance’ does not exist as a crime. In recent years, civil society and NGOs have been promoting the notion of ‘Absence due to a disappearance’ to be adopted in local laws so that the crime can be prosecuted. There is a different kind of politics attached to each of these categories: the Mexican government does not want to adopt the category of ‘disappearance’ or ‘enforced disappearance’ for the political and international consequences that those crimes entail. International efforts by the Inter-American Court on Human Rights and several reports made by the United Nations Human Rights Commissioner detail the extent to which

In fact, the use or acceptance of any of those categories constitutes a profound act of violence, not only on the identity of Alejandro, but on the quest and search of his parents.

Alejandro's identity and understanding is not fixed. He can travel diverse states of absence mediated through his families' experiences. Alejandro's absence remains an event that could be the consequence of a traffic accident, a criminal act such as abduction, or could be understood in relation to other absent persons, thus being considered, and transformed into, a disappearance. In this sense, Alejandro's absence is "continuous with a number of others" (De Laet & Mol, 2000, p. 231). Analysing these performances of absence reveals its multiplicity. This is not to discuss absence in the plural, but the various performances of Alejandro's absence that have relations between them, that are fluid. As Mol argues in her study on anaemia:

Anaemia is multiple, but is not plural. The various anaemias that are performed in medicine have many relations between them. They are not simply opposed to, or outside, one another. One may follow the other, stand in for the other, and, the most surprising image, one may include the other. This means that what is 'other' *is also within* (Mol, 1999, p. 85, emphasis added).

Just as the various anaemias that are performed have many relations between them, Alejandro's absence takes various forms. What I have shown throughout this chapter are not different perspectives on absence as experienced by different families in Mexico. Neither have I been discussing different categories of absence that are useful in some contexts. I have described different versions, different performances of absence, that co-exist with one another. Alejandro's absence is constantly produced and enacted; thus it can only be understood as a dynamic entity that is in fluid states of transition, as new im/materialities interact with existing ones. It is through travelling and moving through

absences in Mexico are increasingly part of a government strategy to 'disappear' dissident voices in collusion with members of organised criminal groups.

uncertain spaces that an “object that isn’t too rigorously bounded, that doesn’t impose itself but tries to serve, that is adaptable, flexible and responsive in short, a fluid object, may well prove to be stronger than one which is firm” (De Laet & Mol 2000, p. 227).

Concluding Remarks

The fluid expressions of Alejandro’s absence — all the traces along his journey — are made actionable by those who experience his absence. Alejandro’s absence does things; it is productive, because its movement brings possibilities for the imagination and the making of scenarios, the plotting of possible maps and routes. By analysing the traces left by the absent, families are able to blend the future into the present and make it actionable. Similar to process of mourning and grieving, families of the disappeared engage with memorials and everyday memorialization practices in order to give presence to those who are absent (Edkins, 2011, 2010). These practices can be seen as ways of “keeping kin and kinship alive” and as alternative forms of care giving. Such practices can be, but are not limited to, landscape transformation, memorial benches and public or private memorials. However, there are other ways in which families can evoke the absent. These alternative practices of making present an absence has been discussed by Riches and Dawson (1998 cited in Maddrell, 2013, p. 508) as an “instrumental response to bereavement”, i.e. these families want “to do something” to counter their bereavement. The notion of “doing something” differs according to each particular case but, generally, the efforts of families are geared towards crowdfunding campaigns or public awareness of a dangerous space or a rare disease. As has been shown, in Mexico, families who want “to do something” are learning how to locate, trace and identify disappeared persons. They are continually engaging with forensic materialities and making sense of numbers, transport data, phone

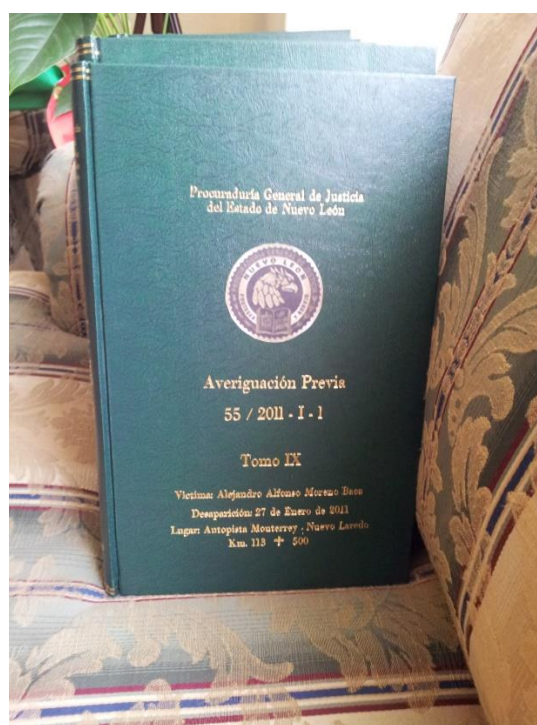
records, drone mapping, social media, statistics, songs, CCTV images, body fluids and forensic analysis, among others.

Alejandro's absence is a fluid technology in the sense that there are a set of practices that are organised around it in order to produce certain outcomes. The fluid states of absence experienced in Mexico open up possibilities for change. Fluid absences transform people: from housewives to human right defenders, from factory workers to national NGO's leaders, and lawyers. These absences transform private citizens into public citizens. It is through this fluid technology that forensic citizens craft themselves as new political subjects. Alejandro's absence has transformed those that gather around him. For instance, when I asked Don Alfonso what was the most significant knowledge he had acquired in all these years of search and he replied: "I am a civil engineer and a business man, but since Alejandro's disappearance, I became a full time researcher. That's what is most significant" (Interview with Don Alfonso, August, 2014).

Technologies depend on a power-seeking strategist who, given a laboratory in Latour's (1983) terms, promises to change the world. In this case, the power-seeking strategists are the families in Mexico who are searching for their loved ones and that, when in contact with fluid technologies, plot, for everyone to see, how they can change the world.

Don Alfonso closes the book he has been showing me. This is one of the ten or twelve volumes that make up Alejandro's file. After all these years of research, and gathering information, maps, newspaper articles, police records, DNA analysis, organised crime network analysis, mobile phone records, tree networks, etc., he has decided that the best way to safely keep all of this information is to produce perfectly bound books with dark-green hard covers. All this time, we have been talking comfortably in their living room. This is where they keep everything

related to Alejandro, *at home*. Don Alfonso lifts the book from the table and carefully places it in orderly fashion along the other volumes. Then, he looks at me and says: *Look, this is Alejandro*.¹⁰⁴



¹⁰⁴ Interview with Don Alfonso, August 2014.

Interlude III

Mother's Day

Every year on 10 May, Mexicans celebrate Mother's Day. As a mainly catholic country, this is a big celebration, since we celebrate not only the women who gave us life, but also La Virgen Maria (Virgin Mary), mother of Jesus, who, by giving birth to Jesus, gave life to each and every one of us. Considering all the symbolism that converges at this date, since 2012 mothers and relatives of disappeared persons have been organising a national march on the 10 May to reclaim the motherhood that has been taken away from them by the disappearance of their sons or daughters. Families from all over the country, with the help of local civil society organisations, travel to Mexico City's most important street Paseo de la Reforma to walk, and sing, and shout: "Son, listen, your mother is still fighting", "*Hijo, escucha, tu madre esta en la lucha.*"

The members of the CLF project decided to set up a "contact desk" to provide information on the project and to talk to as many families as possible. I was volunteering on the day, helping to set up, when I saw Norma. There she was, strong and melancholic, just as in the documentaries I've seen about her and her daughter, Lilia Alejandra, who disappeared on the 14 February 2001, when she was seventeen years old. Lilia Alejandra was found dead seven days later. I knew so much about Norma, the NGO she founded after Lilia's disappearance, the death threats she has received, and I have also seen Lilia Alejandra's "*Quinceañera*" photos. Without even thinking about it I approached her, "*Señora*, I don't mean to be rude but it is an honour to meet you. I know everything you have done for your daughter and for all the other young girls disappearing in Ciudad Juárez." She looked at me, thanked me, and dried a tear from her cheek. Then she began to talk about how girls continue to disappear in Ciudad Juárez, and families are still searching and

struggling with authorities to be heard. Norma continued talking until a teenage girl interrupted us. When I looked at the girl, I couldn't believe it, she looked just like her, like Lilia Alejandra. I did not know what to do. I just wanted to cry. Norma paused for a moment, and introduced the girl to me: "Oh! She is my granddaughter", she told me, "Lilia's daughter."

Until that moment, I had never thought of all the instances where the disappeared had left children of their own. It must have been very difficult for Norma to look at her granddaughter, now almost the same age as Lilia Alejandra when she disappeared. For me, it was certainly a difficult moment (Field notes, May 2015).

Chapter Six: On Becoming

This chapter analyses some of the data collection practices developed by the families of disappeared persons over years of investigations and engagement with state and forensic institutions. This chapter examines the ways in which data collection has transformed these individuals, using Michel Foucault's (1988) notion of 'technologies of the self' as a theoretical framework, and discusses governmentality from a criminological perspective.¹⁰⁵ My analysis considers, first, the ways in which these families have been working to expose the matrices of discourse and practices of power that continuously deny disappearances and criminalise absence in Mexico. Second, I explain how families in Mexico have been able to organise themselves in NGOs and have made use of international attention and government technologies, such as, statistics, numbers, lists and creating laws, to oppose governmental denials and official discourses that criminalise the disappeared. Finally, this chapter argues that even though these practices can be thought as belonging to a 'governance at a distance', where the shape of subjectivities runs according to governmental aims and the creation of a prudent subject, in Mexico's case, families have found ways of being 'less governed by others' through the transformation of their own selves, and by inventing new ways of being subjects. As Veronique Voruz (2011, p. 49) suggests, "For resistance to be effective, we must resist where it is not expected, in ways that are not foretold, using subjective modes that are not those that the

¹⁰⁵ A note on "Foucault's Mother" (Simons, 1996, p. 179): Foucault's genderblindness has been discussed in Feminist literature (see for example, Hekman, 1996) Judith Butler's work on performativity and gender is considered to be a key feminist reading of Foucault's theory of power and governmentality. According to Simons (1996, p.197) Butler's notion of subjectification "facilitates perception of subjection in a subject position as simultaneously a position of resistance that transforms rather than sustains that subjection". In this sense subjectification is, like power, a performative practice. The notion of subversive mothering as feminist strategy has been analysed by Ruddick (1989) when discussing, among other issues, the role of the Mothers of Plaza de Mayo in Argentina to propose a "feminist strategy that refigures mothering as political subject position and pits its pastoral, caring, nurturing practices and rationale against militarist practices and rationale of the state" (Simon, 1996, p.202; see also Ruddick, 1989).

State provides for.” Families’ approaches to and production of forensic knowledge does just that: these practices create forums for their disappeared to appear in public life, and create new spaces for resistance apart from those provided by the state.

Investigative Methodology in “Missing Person” cases: *If in doubt, think murder*

As has been discussed elsewhere in this thesis, missing person cases are handled by either the police or other governmental agencies entrusted with the duty to protect the population. For instance, in the U.K., once a missing person report has been issued, police responders will follow an investigative process similar to that which is deployed during a wanted person case in a criminal inquiry. The missing person investigation can be broken down into three key stages that follow a cyclical (as opposed to a linear) approach. These stages are: the initial response, further investigation, search and location and, finally, the management of the return – i.e. what happens after the person is found and returns home (Fyfe, Stevenson and Woolnough, 2015; Association of Chief Police Officers, ACPO, 2010). According to the ACPO (2010, p. 10), the aim of this structure of processes is to ensure that police officers concentrate on solving these cases and reduce harm, instead of dealing with the missing incidents in isolation.

The initial response stage demands a first assessment of the case, including a risk assessment. As Fyfe, Stevenson and Woolnough (2015, p. 415) have pointed out, during this early stage information on the disappearance tends to be collected by a ‘call handler’, working at a force contact centre. The information obtained from initial questioning is used to provide intelligence for a preliminary risk assessment made by a sergeant or

inspector.¹⁰⁶ Within the first few hours after a report has been made, and the risk assessment taken into account, police officers undertake a physical search by visiting the home of the missing person, or the place where s/he was last seen.¹⁰⁷ The physical search is followed by a search for intelligence using police databases, and information collected from hospitals, friends, social media profiles, mobile phones, vehicles, etc. In some cases, family members provide incomplete or unreliable information and, thus, police officers will also make assessments of the validity of the intelligence. If there is any suspicion as to the reliability of this information, the ACPO methodology suggests: *if in doubt, think murder*.

During the second stage, further investigations, searches and, in most cases, location take place. As part of this process, key informants, such as family members and former partners, are re-interviewed. Patrol officers will follow the typical routes taken and places frequently visited by the missing person searching for information. A process of 'data mining' is carried out: CCTV is reviewed, public transport agencies are contacted, and mobile phones tracked, for instance. If the individual has not yet been located, other organisations and experts are called upon for help. This includes Family Liaison Officers and Police Search Advisors. The role of the Family Liaison Officer is to provide support for family members, and to advise them on the use of social media, family press appeals, and other strategies that can raise awareness of their search for their missing person (Fyfe, Stevenson and Woolnough 2015). Finally, during the last stage of the process (the management of return) police officers interview the return missing person to make sure

¹⁰⁶ Initial questions can include: is the absence out of character? Does the person have specific medical needs? Is the person likely to be subject to a crime? Is the person the victim of abuse or at risk of sexual exploitation?

¹⁰⁷ Since 2013, the risk assessment score assigned to some cases will not necessarily necessitate an *in situ* search, but circumstances will be constantly monitored, and risks continuously re-assessed.

that the wellbeing of the individual is assured and that no further action to procure their safety might be taken.¹⁰⁸

The search assemblages that are created around missing persons' cases include a variety of actors, from call handlers working at police centres, to sergeants, police officers, family members and those with close relationships with the missing person, as well as other institutions, such as the Missing Persons Bureau (MPB). In different stages, these actors take part in the construction of scenarios that imagine what might have happened to the absent person based on the data available. The data collected during the investigative process might not be available to all of the actors. For instance, family members might be involved in the first stages of the search, tending to be considered the providers of basic information, but not the latter processes of the investigation. Many investigative tools, such as technologies and infrastructure, are likely to be only available to police officers or members of the MPB during the search. For example, the police have access to analytical tools like iFIND, which uses the statistical analysis of different locations to determine likely 'geographic scenarios'. The iFIND programme analyses data, including age, gender, mental health conditions and distance from the place s/he was last seen, among other information, in an attempt to hypothesise the location of the missing person (National Crime Agency, 2016, p. 5).¹⁰⁹ In cases where 72 hours have passed since the disappearance, the police then have the responsibility to forward the missing person case to the MPB to widen the search. The MPB allows for a coordinated search among a number of databases, including matching unidentified bodies with missing person

¹⁰⁸ As Fyfe, Stevenson and Woolnough (2015) explain, the police may also make it clear to the individual that they have the right to go missing, but they need to contact the police to report that they are safe, but simply do not want to be located

¹⁰⁹ According to the report issued by the National Crime Agency, the Missing Persons Bureau developed an "operational tool designed to improve the speed and effectiveness of searches for missing persons" (NCA, 2016, p. 6). The tool, iFIND, is an "evidence informed product providing statistical analyses of location information for different categories of missing persons" (NCA, 2016, p. 6).

profiles.¹¹⁰ In the U.K., 80% of missing person cases are resolved by the missing individual being found alive by police officers, or if the individual returns home voluntarily.¹¹¹ In rare cases (between 0.6% and 1% of all cases reported to the police) the missing person is found dead (Fyfe, Stevenson and Woolnough, 2015, p. 420).

This analysis of the investigative methodology for the location of missing persons in the U.K. allows for an exploration of the politics associated with different search assemblages. By contrast, for most of the families I interviewed in Mexico, the police search was understood as ‘desk bound search’. This meant that authorities might send an official document to the local penitentiary to see if someone under the same name as the missing person had been detained. Or they might write another letter to check if the missing person has been hospitalised. This leaves families feeling hopeless, since the exchange of letters and data can take months, or might not happen at all. Thus, they will feel obliged to start an active search themselves by tracing the last steps of their loved one, and developing *in situ* strategies of location.

In what follows, I will reflect on a particular search strategy developed by Norma and the self-transformation that she experienced while searching for her daughter, Paloma.

¹¹⁰ As the guidelines produced by ‘Sense About Science’ indicate, a ‘match’ between any two given DNA samples does not necessarily mean that an individual has been identified. Since forensic DNA analysis typically uses 16 or more genetic markers, as opposed to full DNA profiles, it is possible that several individuals in a database may ‘match’ with the same DNA profiles. (Sense about Science, 2017, p. 27).

¹¹¹ For those cases where the person is not found, a long-term case review is set up. The review “should take place every twenty-eight days for the first three months, then at six-monthly and twelve-monthly intervals, then annually thereafter” (ACPO 2010, p. 52).

‘Let me tell you the story of who Norma Ledezma was and who
Norma Ledezma is now’

I am starting my fieldwork. I am excited but also very nervous. I spent the last year in Durham reading and learning about the stories of disappearances in Mexico. And now I am in a big, gardened retreat house on the edges of Mexico City. Even though this house is within the borders of the city, its big gardens and the several rooms that comprise it make it ideal for my research purposes. This is one of the reasons I selected this place: it allowed me to be within the city limits — which is as far as the risk analysis carried out by the university allowed me to go — but its surrounding greenery, and large size allows you to feel far from the buzzing activities of the capital.

I am staying here for four days with sixteen relatives of disappeared persons who have been ferociously looking for their loved ones. They are not just *any* relatives. They are national leaders: mothers and fathers who are transforming the ways that we talk and think about disappearances in Mexico. My first interview of the day is with Norma. I am feeling uneasy and confused. As preparation for the interview I have been reading about ‘Justice for Our Daughters’ (*Justicia para Nuestras Hijas*) and ‘Bring Our Daughters Back Home’ (*Nuestras Hijas de Regreso a Casa*) two of the most important NGOs in Chihuahua, one of the Northern states of Mexico that supports families of disappeared persons in the region. But I am confused: the name of the founding member for both organisations is Norma. Both Normas were looking for their teenage daughters, who had worked in *maquilas* and disappeared in the early 2000’s.¹¹² Tragically, both had found the bodies of their daughters’ weeks or months after their disappearances. Both had been

¹¹² Maquiladoras are factories that are subsidiaries of foreign companies. They operate with imported raw materials, and re-export all their finished products to the country of origin. [Definition taken from the Inter-American Commission of Human Rights (IACHR) report on the petition of admissibility of the Case Paloma Angélica Escobar Ledezma Et Al. Mexico, March 14, 2006. Available from: http://cidh.org/annualrep/2006eng/Mexico.1175.03eng.htm#_ftn2, (Accessed July 2016) See also Chapter 4, page 6, footnote 6.

found lying on the ground in different parts of the Northern state of Chihuahua, both having been brutally assaulted. Even though I may have an idea of *who* Norma is, I am just about to fully understand who she *was*, and most importantly, who she *became*.

We entered one of the bedrooms, where I had planned to conduct the interview. She sits in front of me and after a few exchanges regarding informed consent and anonymity, she started by saying: “I am Norma Ledezma [...] let me start by telling you the story of who Norma Ledezma was and who Norma Ledezma is now” (Field Diary, 3 September, 2014).

...I come from the capital city of Chihuahua in the state of Chihuahua, the biggest state in Mexico. There, for women who do not have any sort of academic preparation, the only possible way of finding work is in the maquiladoras. So I worked at a maquiladora. A married woman, with two children. Average, you know, in what you can consider an ordinary family. [...] I worked in the maquiladora as a group leader from 6am to 4pm. My daughter... I had my sixteen year-old daughter [called] *Paloma*, who worked in the same maquiladora in 2002. Along with her work at the *maquilas*, she studied for her high school [diploma] in the evenings...it was one of the opportunities that the *maquila* offered [to continue your studies after work] and on Saturdays she studied in a computing school. She was only sixteen years' old. She had big dreams. That's why she attended both schools, the high school in the evenings and the computing training on Saturdays. My son, he was twelve at the time. My husband was a labourer, a construction worker [...] (Interview with Norma Ledezma, September 2014).

The state of Chihuahua, in the northern part of Mexico has long been considered dangerous. For instance, the city of Ciudad Juárez has, since 1993, seen more than one thousand girls disappeared, tortured, sexually assaulted and then murdered. According to Amnesty International (2005) the victims have been, in the majority, young girls between sixteen and twenty five years of age from low income households. Some of these girls worked in assembly plants —*maquilas*— and disappeared after leaving work. Others

were either students, or informal commerce employees, or women forced into a combination of prostitution and drug trafficking (Amnesty International, 2005; see also Chapter Four in this thesis).

On Saturday March 2, 2002 around 3:15pm, Paloma left home to attend her computing school. The family had recently move house, and Paloma was hoping to return home early in order to help her mother unpack their household items, but she never returned. Her family waited for her until 9pm, the time she usually arrived home from school. But, on that day, it was getting late and Paloma was nowhere to be found. As Norma told me:

She didn't have a mobile phone, so we started searching for her. We went to her computing school but it was closed...we visited our former home...a flat where we used to live, and started asking around the neighbourhood in case someone had seen her...we spoke over the phone with my brothers, with Paloma's friends...it was almost 2am and we didn't know where Paloma was [...] I immediately knew that something happened to her because she was a *muchachita* ['little girl'], she was a girl, sixteen years' old...she had never been away from home, she was never away from home after nine pm, so we knew that something had happened to her, we kept searching until dawn...Early the next morning we continued searching for her, [we thought] maybe she got lost while trying to get to our new home...but this idea was only something we told ourselves to avoid feeling the reality...(Interview with Norma Ledezma, September 2014).¹¹³

Norma and her family searched for Paloma in her friends' houses, hospitals and at the police station. They visited the computing school again and talked to the school directors who confirmed that Paloma had attended her classes the day before, and had even applied for a change to her school programme because she wanted to attend classes on Saturday mornings. After sorting out these changes, she left the school unaccompanied. With this information, Norma went to report Paloma's disappearance to the representative of the

¹¹³ '[B]ut this idea was only something we told ourselves to avoid feeling the reality' in Spanish: "...un amparo que uno se hace para no .. para no sentir esa realidad..."

Public Prosecution Service (MP), who forwarded the case to the head of the Special Sexual and Family Crime Group of the Chihuahua State Judicial Police.

In that moment, Norma's family faced what several Mexican families reported during my fieldwork as 're-victimisation' through the actions of state authorities. 'Re-victimisation' can take several forms but, generally, consists of discriminatory treatment on gendered grounds, as expressed through the authorities' actions. Authorities' placed importance on hostile formalities that pointed toward the guilt of either the family itself, or of the "moral behaviour" of the missing girl, for instance: questioning the clothes she was wearing, her relationships with friends and boyfriends, etc.¹¹⁴ In Paloma's case, the authorities asked the family to wait at least 72 hours to see if she returned home after spending time with her boyfriend:

At that time, in the state [of Chihuahua] a disappearance was not considered a crime: it was not part of the Criminal Code. Therefore, authorities would only create a [missing] report, but not a criminal report, so Police officers will start looking for the person after 72 hours had passed. [...] [N]owadays things have changed with all the things *we have done*. But back then, we didn't know anything about this...the first thing that the local authorities told me was to wait... 'Ma'am she must have run away with her boyfriend, you should wait 72 hours, okay?' This happened on Sunday morning, but I knew I could not wait [...] we were there and my family was in crisis, so we gathered together, and on that same day we started doing *brigadas* [search brigades] to look out for her...this was a great difference, I suppose, to what I know now from several cases in past years...cases I got to know later, but that happened in 2001 or 2000; in those cases there was not [an immediate search for the person]...so I empirically, I mean, not even empirically, it was *my own drive, my maternal motivation to look for her*...I know she is not well. She is not at her friends', she is not at her boyfriends', or at her ex-boyfriend's, something has happened to her. If the authorities are not responding, we will have to look for her. (Interview with Norma Ledezma, September 2014, my emphasis.)

¹¹⁴Information taken from http://cidh.org/annualrep/2006eng/Mexico.1175.03eng.htm#_ftn (Accessed: May 2016).

At that time, Norma worked for the first aerospace manufacturing plant established in Mexico, now the largest aircraft wiring plant in the world.¹¹⁵ Norma was a group leader with up to forty of the plant's employees working under her leadership. Paloma was an operator: she was one of the thousands of women who perform the manual work inside the *maquiladoras*. At the beginning, Norma did not know how to explain Paloma's absence, and she referred to her daughter's disappearance as a kidnapping: "Nowadays I know it wasn't a kidnapping, at that time I said 'she was kidnapped'; I couldn't give another term [to her absence], she was not there, but I always knew that if she wasn't there it had been against her will." (Interview with Norma Ledezma, September 2014.)

On Monday, Norma reported Paloma's absence to the maquiladora. Her employer offered her all the economic support that she might need in case her family received a ransom call. Her friends at the maquiladora supported her by distributing Paloma's "Missing" poster across the city. The maquiladora industry recruited people from all over the state; distributing posters among workers was a way to raise greater awareness of Paloma's absence. As Norma explains: "In that moment, the police had not yet started the search for Paloma, but we, as a society were already doing things."¹¹⁶

Norma visited radio stations and contacted television shows and newspapers to inform them of Paloma's disappearance. After Norma and her family had begun displaying Paloma's "Missing" posters across the city, she started receiving calls from the mothers of other girls who disappeared in the same area in earlier years, and whose cases had not

¹¹⁵ Norma was employed by Safran, a company that has been operating in Mexico for over 20 years, primarily in the aerospace and security markets. Safran operates the largest aircraft wiring plant in the world in Chihuahua. When the plant was inaugurated in 1996, it was the first aerospace manufacturing plant in Mexico. The site designs and produces 95% of the wiring used on the Boeing 787 Dreamliner and produces 75% of the wiring on the Airbus A380, the world's biggest jetliner. It is Mexico's largest aerospace employer. Nowadays the plant in Chihuahua has over 4,000 people who work in the largest cabling system manufacturing plant in the world. They have four plants in Mexico and work with other companies in the field of biometrics and security systems and the manufacture of smartcards. Information from <http://www.safran-group.com/country/mexico.html> (Accessed: May 2016).

¹¹⁶ Norma's comments in Spanish: '*Todavía la policía no se activaba, pero nosotros como sociedad, ya.*' (Interview with Norma Ledezma, September 2014.)

yet been investigated. While trying to seek help, Norma came across the work of existing non-governmental organisations in the city that aimed to raise awareness of the disappearances happening in Chihuahua through public demonstrations and marches, but none of them had begun searches or independent attempts to locate the missing girls. “...[T]hose [NGOs] help you politically; you get a political impact. They are very useful, but families want something more, something more tangible.” (Interview with Norma Ledezma, September 2014.)

On Wednesday, four days after Paloma’s disappearance, two police officers arrived at the family home. The police asked questions about Paloma’s relationships, they searched her room for a “goodbye-note” but they found nothing. After the police realised that Paloma might have been taken against her will, they started to search for her:

I asked them, ‘Are you the ones in charge of looking for my daughter?’, ‘Yes, ma’am’, ‘Okay, then I’ll go with you; I’ll do the search with you.’ I got into the police car with them [and we started patrolling the area, visiting Paloma’s friends, etc.]...It was then that I started learning the police codes...I learnt that if they said *X40*, they were talking about a suspect, or that if they said *X17* that was the code for their boss...and so on and so forth. (Interview with Norma Ledezma, September 2014.)

As Norma outlined in our interview, she learnt the codes that the police officers used to communicate, for instance, to call for backup, to issue an alert for a dangerous situation, etc. But this was not the only knowledge she acquired. As Norma told me:

At the beginning I didn’t know what was a computer, or a ‘mouse’, I was afraid to use those things...I didn’t even know who was the local prosecutor, what activities an attorney does, or the role of the public prosecutor [...] I arrived to the [Chihuahua state] governor’s office with a file: two handwritten pages explaining all the inconsistencies I had found in the way that Paloma’s case was handled. [...] Now I am more prepared, but at that time I just asked them to use their *common sense*, if she left home at 3:15pm, you need to know what happened to her afterwards: which bus she took, who was driving that bus. [...] You can check the CCTV cameras, you know, *common sense*...but none of those things were done! [...] I couldn’t believe they were searching for the

girls as isolated cases [...] they were looking at things vertically! They needed to search for the girls horizontally: use the information they have on one case, and it may help them with another, [you could be looking for] the same criminal...it is just *common sense*. (Interview with Norma Ledezma, September 2014, my emphasis.)

Relying on experience and the usefulness of “common sense” were practices that families of disappeared persons talked about constantly. These families are aware that much of their knowledge has been acquired through the experience of having lost someone they loved and through the uncertainty that a disappearance generates. Norma’s description of searching for the disappeared “horizontally” recalls the investigative strategies employed by police officers in the U.K. described at the beginning of this chapter. As time passed, Norma became more aware of the context of insecurity in the city of Chihuahua and of the importance of her role in investigative processes.

Twenty-seven days after Paloma’s disappearance, on March 29, 2002, 4.5 kilometres along the highway that runs from Chihuahua to Ciudad Aldama, Paloma’s dead body was found 800 meters from the road. According to police information, a photo of Paloma’s former boyfriend was also found at the scene. Paloma’s body was in an advanced state of decomposition, which made it difficult to identify her, but the boots she was wearing had protected her feet. Paloma was visually identified by her dad, who recognised her feet and her distinctive teeth, which were “just like her mother’s.”¹¹⁷ Norma did not want to see Paloma’s body, but she recognised the clothes that she had been wearing on the day she disappeared, and a small bracelet that she always carried. In 2002, DNA analyses were not part of the identification process in Chihuahua. Thus, no samples were taken, and the visual identification by her parents and similarities in Paloma’s ante-mortem

¹¹⁷ Interview with Norma, September 2014.

(height, hair colour, age, etc.) as well as post-mortem descriptions were used to confirm her identity.¹¹⁸

At Paloma's funeral Norma was asked by the journalists covering her daughter's case if her search was over now that Paloma had been found, to which Norma replied: "[Now] I am looking for justice, justice for our daughters." On that day—the same day that she buried her daughter— Norma founded Justice for our Daughters, an NGO with the aim of helping other families who have suffered the disappearance of a loved one. The following day Norma made a request to the authorities to be taken to the site where Paloma's body was discovered. While waiting at the police station to be escorted to the site, Norma listened to a conversation between police officers. According to the police codes they were using, Paloma's body had been found, but they needed someone to blame in order to close the case. The police planned to frame Paloma's former boyfriend. Once Norma arrived at the site, she began to consider whether Paloma's former boyfriend would have driven all the way to this site, and she realised that the perpetrator must have had an accomplice, because the place where Paloma's body had been laid was not easy to reach. She also noted that a Police Headquarters was being built in the vicinity of the site, and that the security cameras installed in the area should have acted as deterrent to the perpetrator. Her newly acquired knowledge of Police codes and procedures had unintentionally helped her understand that the police officers were framing Paloma's former boyfriend. Analysing this information, Norma realised that Paloma's ex-boyfriend

¹¹⁸ When questioned about the use of DNA analysis for the identification process, Norma recalls that she did not know that the technology existed until months later, after she had buried Paloma. It was a local forensic expert who advised her to ask for DNA analysis to be carried out on the human remains that were stored in the local mortuary in order to compare it with DNA samples from the other families who were looking for their daughters. Her knowledge of forensic anthropology and identification of victims was further developed through the talks and seminars that members of the EAAF gave to families in Chihuahua. In 2004-2005 the EAAF was already working in Chihuahua, providing forensic technical assistance to the authorities.

was not guilty, and that she needed to look further in order to find the person who was responsible for her daughter's murder.

Further investigations showed that the commander of the Chihuahua Judicial Police who was investigating Paloma's disappearance and death had "interfered with the investigation by planting evidence that led to a refocusing of the line of inquiry in the Paloma Escobar Ledezma case."¹¹⁹ In 2006, Norma filed a case against the Mexican government to the I/A Court H.R. for the violation of human and children's rights, as well as for the inadequate investigation of Paloma's case.¹²⁰ In 2012, the Mexican government recognised its failure to protect Paloma's life, the inconsistencies in the investigation of her murder, and their inability to bring those responsible for the crime to justice.

Norma had only completed her education to a Primary School level when Paloma disappeared. Later, she decided to continue studying in order to acquire the tools that she needed to find justice not only for Paloma, but for the thousands of families in Chihuahua who were (and are) still looking for their daughters. As she put it: "I thanked Paloma because her absence motivated me to do this [to continue with her studies] [...] I needed to fight for the safe return of all the 'doves' to their nests, because mine never returned home. They cut her wings."¹²¹

In January 2016, Norma graduated from her Bachelor's Degree in Law. That same year she began a Master's in Constitutional Law. Justice for Our Daughters, the NGO that lead by Norma, is one of the most important organisations in Chihuahua in supporting the families of disappeared persons, including with their searches. During my interview with

¹¹⁹ According to the IACHR report on the admissibility of the Paloma Angelica Escobar case, the Mexican State maintains that "this official was punished with an 11-month prison term for making false allegations to the detriment of the public administration." Criminal case 138/02, Chihuahua, November 8, 2002, cited in IACHR (2006).

¹²⁰ According to the IACHR Admissibility report (op. cit.) the State had failed in its duty to adopt special measures of protection and assistance with respect to the children under its jurisdiction, in spite of being aware of the context of violence reported in Chihuahua over the past ten years.

¹²¹ Paloma's name translated into English is 'dove'.

Norma in September 2014, we discussed a number of issues. Our discussion included the successful cases in which she has participated, her NGO's involvement in the creation of Search Protocols for missing girls in Chihuahua, and how she felt she experienced a process of learning "backwards": first learning international law in order to submit Paloma's case to the I/A Court H.R. and, later, learning about Mexican judicial system in her attempts to grasp local normativity. Norma also emphasised how the disappearance cases have changed over time:

Just as organised crime changes its internal structures and methodologies, we also saw changes when [former president] Calderon started his famous "war". [Since then,] I started seeing cases of everything, disappearances of men and women [...] now a lot of families ask for my help in the search for their sons and it has been terrible! They are disappearing at a massive rate. (Interview with Norma Ledezma, September 2014.)

As part of her journey of transformation, Norma acquired certain knowledges that allowed her to carry out the search during the initial hours after noticing Paloma's absence. Norma's "common sense" and inquisitive mind helped her to understand and memorise police codes and procedures, identify where forensic processes had not been correctly followed, and educate herself on both local and international criminal law. This knowledge has also enabled Norma to navigate the uncertainty of a bureaucratic and dismissive state. It is, then, crucial to examine not only the knowledges that Norma has acquired, but those that she produces and shares while actively engaging in search practices. Through the establishment of Justice for our Daughters, Norma has helped other families to find their disappeared kin. During our interviews and informal talks, these families frequently emphasised the importance of knowing, first, how to respond to disappearance cases during the first hours, and, second, knowing what information to collect in order to help to determine the missing person's whereabouts. These families

are, it seems from my interviews, convinced that if they had knowledge of these processes before the disappearances of their loved ones, they would have been better prepared, with all the necessary tools to immediately begin a search, with the hope of locating their missing kin.

The practices of search carried out by citizens' and their involvement with forensic institutions are the consequence of the authorities' dereliction of duties. Indeed, this dereliction can be understood as the systematic non-production of knowledge by the Mexican authorities, or as Melissa Wright calls it, deliberate "epistemological ignorances". This non-production of knowledge has been found to be especially prevalent in spaces where a more nuanced and technical knowledge of events could threaten the interests of industry, the police or other political elites (*cf.* Ottinger, 2013).

Trust in the police and criminal justice system, as well as, a belief in their reliability are both crucial for the families of victims, as well as the public's perception of security. Nonetheless, families will engage in some form of search practice in the aftermath of the absence of a family member independent of the effectiveness (or perceived effectiveness) of police participation in the case (Parr, Stevenson and Woolnough, 2016). These practices increase in scope and depth depending on how reliable the family in question perceives the police search to be. If families feel that the police search has not been exhaustive, or that the authorities have not used all the technology and infrastructure that they have available to locate absent persons, then they will find methods to conduct their own independent searches.

Internal and External Geographies of Search

In an effort to understand the drivers behind families' practical, material or virtual act of trying to locate another human being, what they define as "search/ing", Parr, Stevenson and Woolnough (2016, p. 69) see search/ing practices not only as symptomatic of the emotional need to be "doing something", but also as a response to police (in)actions.¹²² Search/ing is understood not "as a unified category, act or feeling, but instead constituted by a diverse geography of shifting modalities, materialities and meanings" (2016, p. 67), for instance: families' search/ing strategies sometimes involve the participation of other search agencies (mainly private services) alongside police investigations.

In some contexts, particularly when the absence of a person occurs in ambiguous circumstances, the process of grief is inherently complicated, and families may find themselves experiencing an ambiguous loss (Boss, 2002).¹²³ In these cases, families cope by creating "continuing bonds" with those who are absent. One way to do this is by maintaining the discursive life of the missing, which entails creating spaces where the absent person's biography can be shared and held open. However, families can also feel paralysed by the trauma of their loss (Parr, Stevenson and Woolnough, 2016, p. 66). As a result, families might engage with practices of search as a "key mode through which an *emotional management* happens, rather than just a sign of frozen incapacity" (Parr, Stevenson and Woolnough, 2016, p. 67, my emphasis).

Parr, Stevenson and Woolnough, (2016, pp. 67-70) describe families' search/ing strategies as involving "internal and external geographies". External geographies

¹²² Parr, Stevenson and Woolnough (2016, p. 66, footnote number 2) use the term "search/ing" to "indicate the simultaneous reference to a practical, material or virtual act with particular parameters (a search) and reference to a constant processional investigation to locate another human being (searching)".

¹²³ Pauline Boss coined the term ambiguous loss to make reference to instances where a "family member vanishes *physically* with no verification of whereabouts or fate as dead or alive or fades away *psychologically* from dementia and other cognitive or emotional impairments. In either case, grief is inherently complicated, not by psychic weakness but from the profound complications of loss shrouded in doubt" (Boss and Cames, 2012, p. 456)

constitute families' liaisons with the police or with private agencies to help them in their efforts to locate the missing. In these cases, search/ing practices are based upon latent knowledges of the personal geographies of the missing person. Thus, following the routines of the missing, families will visit their favourite places and take their usual routes. On the other hand, internal geographies are understood as interior accounts of search, where imagination, memory and emotions are at play when families remember special places or significant moments that they had with the absent person. These recollections function as attempts to make sense of the absence and to find a new place for the absent person to inhabit in the imaginations of family members.

The emotional management that takes place within the internal geographies of search echoes Norma's reflective accounts on the unfeasibility of Paloma's boyfriend being the perpetrator of the crime. The dialectical movement between Norma's internal geographies of search and her contact with police and forensic data (external geographies of search) was what made Norma's transformation from *maquila* worker to lawyer and human rights activist possible. These journeys of transformation can be read as part of a care of the self: that is to say, part of the technologies of self-improvement and perfection that one can perform, as put forward by Michel Foucault. The notion of "technologies of the self" was developed by Michel Foucault (1988) to analyse the practices by which humans develop self-knowledge. In his discussion of the Greek word *paraskeuazo*, or, 'to get prepared', Foucault describes a set of practices "by which one can acquire, assimilate, and transform truth into a permanent principle of action" (Foucault 1988, p. 35).

In later work, Foucault shifted from thinking about the machinations of bio-power towards the principles and systems of governmentality. Thus, in his works *The Use of Pleasure* and *The Care of the Self* (both published in 1984), Foucault not only represented the idea of articulation of disciplinary mechanisms and regulatory apparatuses, but the

main theme of an ethical reflection focused on subjectivity: the government of the self by the self in its connections and relations to others (Senellart in Foucault, 2007, pp. 370-1).

The “subject” no longer designates simply the subjected individual, but the singularity affirmed in resistance to power—the “revolts of conduct” or “counter-conducts” considered in the 1978 lectures’ (Senellart in Foucault, 2007, p. 376).

In this sense, Foucault depicts individuals who are capable of choice and action, and are able, too, to transform and use the shaping of their own selves for political means. For Foucault “there is no first or final point of resistance to political power other than in the relationship one has to oneself” (Foucault, 2005, p. 252). In what follows, I explain what “technologies of the self” are, and how they can be understood in the context of advanced liberal democracies. I will argue that, even though families’ practices of search can be thought as part of the shaping of a specific subjectivity aligned to governmental aims, families’ practices of search and engagement with forensic knowledge in Mexico are creating autonomous, disobedient subjects.

Foucault’s “Technologies of the self” as a mode of *desubjectivation*.

Michel Foucault devised four types of technologies that imply certain modes of training and modification of individuals, not only in the sense of acquiring certain skills, but in the sense of acquiring certain attitudes. Each technology is associated with a certain type of domination: *Technologies of production*, through which we produce, transform, or create things; *technologies of sign systems*, which allow us to use meanings, symbols or signification; *technologies of power*, by which the conduct of individuals is directed to certain ends and subjected to domination, and *technologies of the self*, whereby individuals, by their own means or with the help of others, act on their own bodies, souls,

thoughts, conduct, and ways of being in order to transform themselves and attain a certain state of perfection or happiness (Foucault, 1988, p. 18). Foucault was particularly interested in the interaction between oneself and others and how an individual might act upon himself through technologies of individual domination (technologies of the self).

These four techniques rarely function separately and are linked to different forms of developing knowledge. The relation between technologies that enable the domination of others and those of the self is analysed by Foucault through his notion of “governmentality” (Foucault, 1988, p. 19). Studies on governmentality focus on the different forms of rule by which authorities govern populations, functioning through their “subjectifying” of individuals. For Nikolas Rose, governmentality works as a political rationality, and uses an array of governmental technologies. Therefore, governmentality can be understood as concerning both the ways in which rulers order the “multitudinous affairs of a territory and its population in order to ensure its wellbeing” (Rose, 1996, p. 42), as well as the divisions between different types of authorities and their specific spheres of action. In sum:

This is not a matter of the implementation of idealized schema in the real by an act of will, but of the complex assemblage of diverse forces (legal, architectural, professional, administrative, financial, judgmental) that promise to regulate decisions and actions of individuals, groups, organisations in relation to authoritative criteria. (Rose & Miller 1992, p. 183 in Rose, 1996, p. 42.)

Governmentality, then, finds its place within liberal mentalities of rule in which the concept of “civil society” is both the object and reason of government: distinct from political intervention, but still potentially alignable to political aspirations (Rose, 1996). For Nikolas Rose, there has been a transformation in the rationalities and technologies of government. What Rose explains as advanced liberal strategies are techniques of government that create a “distance between the decisions of formal political institutions

and other social actors.” These actors are conceived in new ways “as subjects of responsibility, autonomy and choice, and advanced liberal strategies seek to act upon them through shaping and utilizing their freedom” (Rose, 1996, p. 54). Advanced liberal societies follow three characteristic shifts: from the pluralisation of social technologies, to a new relation between expertise and politics, and a new specification of the subject of government.

The pluralisation of social technologies conceives the work of power through a series of “centres of calculation” that exercise “government at a distance” by means of the instrumentalisation of a regulated autonomy (Latour, 1987, pp. 232-57). In this sense, governmental power is not centralised within the state, there is, rather, a certain degree of autonomy among different social organisms, such as prison systems, schools and hospitals, or social work offices, where each institution works as an extension of the centre of governance and concentrates a certain kind of expertise and knowledge (Donzelot, 1979 in Garland, 1997, p. 179). The alliance of the state with other institutions sets up “chains of enrolment, responsabilisation and empowerment” to sectors and agencies that are, though distant from the centre, yet tied to it through a complex of alignments and translations (Barry, Osborne and Rose, 1996, pp. 11-12).

These practices support the idea that with the notion that through over-governance authorities can undermine their very attempts to govern. Therefore, far from a lessening or abdication of governance, Liberal systems of government find security through governing “cautiously delicately, economically [and] modestly” (Barry, Osborne and Rose, 1996, p. 8). Both collectivities and individuals have been taking responsibility for issues that had formerly been considered to be under the purview of authorised governmental institutions. While part of the overall processes of government, this structure places responsibility on private institutions for both the processes of carrying out governmental activities as well as their outcomes. As Burchell (1996, p. 29) points

out, this might be described as a new form of responsabilisation for both individuals and non-governmental institutions, and corresponds to the ways in which the governed are encouraged to conduct themselves freely and rationally. Thus, liberalism encourages the governed to develop an entrepreneurial relationship to their own selves in order to effectively establish this form of government (O'Malley, 1996). This political rationale has changed the ways that we think about, and act upon, one another and ourselves. For instance: public authorities have made use of different ways of transforming the techniques and forms of expertise required to exercise governmental powers, without recourse to any direct form of intervention.

This governmental model has developed auditing, accounting and management techniques that have made it possible to establish a "market" for public services (*cf.* Barry, Osborne and Rose, 1996; Rose, 1996; Lawless, 2011). Making expertise auditable has become one of the key mechanisms by which governors can respond to the plurality of expertise and the "inherent controversy and undecidability of its truth claims" (Rose, 1996, p. 55). Therefore, having the capacity to be effective, prudent and efficient have become practices promoted by the government at a distance. What is being constructed is a relationship between government and the governed that constantly entails that individuals are the subjects of their lives, fashioning themselves through exercising choice and practicing freedoms in order to maximise their happiness and fulfilment (Rose, 1996; Burchell, 1996) to the extent that:

[...] practices of the self are what give a concrete shape to the exercising of freedom, that is to say, are what give a concrete form to *ethics*, there opens up a new, uncertain, often critical and unstable domain of relationships between politics and ethics, between the government of others and practices of the self (Burchell, 1996, p. 30).

Practices of the self, prudentialism and the duty to be well constantly frame neoliberal practices of government (Burchell, 1996; O'Malley, 1996).¹²⁴ In this respect, crime prevention, detection and the punishment of offenders, as well as the preservation of public tranquillity, seem to have become the direct responsibility of ordinary citizens (O'Malley 1996). Common phrases such as “working together against crime” or “partnerships with police” are representative of governmental strategies in countries like the U.S., Australia and the U.K., and are used to signal the changing relation of expertise between police and the public (O'Malley, 1996, p. 201). Governmental practices of crime control are, then, promoting new forms of subjectivities whereby civilians also hold the responsibility of reducing crime. Crime is seen as something inherent to social life, rather than a disruption of normality. Thus, “technologies of the self” turn into practices that not only apply to confined spaces like prisons, but also to a set of mechanisms that can help us to improve our understanding of scenarios ruled by uncertainty (*cf.* Feeley and Simon, 1992; O'Malley, 1996).

In the Mexican context, for instance, cases of disappearance are usually framed in terms of a crisis of prudentialism. For example: the disappearances of girls and women are the result of their own poor choices, and their absences are constantly criminalised on gendered grounds. As Melissa W. Wright argues (2016, p. 8), for authorities in Mexico, these “public women” are not matters of public concern, but rather the private responsibility of families who need to control their wayward and over-sexualized female members. These disappearances represent crises of patriarchy, not crises of the state, and, as such, their deaths and disappearances are private, not public, matters. Meanwhile,

¹²⁴ O'Malley argues that there are three specific changes that have promoted the transformation of socialised actuarialism into prudentialism: the retraction of socialised risk-based techniques from managing the risks confronting the populace; their progressive replacement through the extension of privatised risk-based techniques; and the articulation of this process with the strategic deployment of sovereign remedies and disciplinary interventions that facilitate, underline and enforce moves towards government through individual responsibility. (1996, p. 99)

authorities have blamed the increasing amount of disappearances and violent deaths among men on the victims' involvement with organised crime, particularly in drug-dealing activities. This reframes the responsibility to protect and secure the population: rather than being the obligation of the state—and its failings also the responsibility of the state—these obligations are deferred to individual households. Violence and disappearances are, thus, private crises, not matters of public concern.

Shaping subjectivities

Making people write things down, prescribing what must be written down and how, is itself a kind of government of individual conduct, making it thinkable according to particular norms (Rose, 1996, p. 55).

Research in Criminology and Penology has shown how for almost all of the 20th century, the crafting process of the “criminal subject” (a term given to the individual that crime control practices seek to govern) was the “individual delinquent” and the “legal subject” (Garland, 1997, p. 190). Penal regimes do not assume that the self-responsible, security-conscious and crime preventing subject exists *per se*. Hence, they are continuously concerned with teaching techniques of control, self-direction and moral agency to criminal subjects (Garland, 1997).

The role of materiality and space in shaping subjectivity is illustrated in David Garland's analysis of “the responsible prisoner” in prison and probation services in Scotland (Garland, 1997). The programme is presented as “training for freedom” and teaches the individual how to be an entrepreneur of his or her own personal development. Through encouraging the writing of diaries, practising decision making in different scenarios, self-examination and spiritual exercises, inmates “learn to govern themselves in ways that

emphasize individual agency and autonomy” (Garland, 1997, p. 192). The responsible choice is successfully practised and, later on, rewarded by a “Sentence Planning Scheme” where inmates are able to “take part in the government of their own confinement” (Garland, 1997, p. 192) by allowing them to choose their favourite options for developmental activities or jobs while still in confinement, as well as deciding in which prisons they would like to spend the rest of their sentence. In sum, “prisoners are taught to become responsible, prudent subjects by techniques of the self that assume an alignment between the self-interest of the prisoner and the governing interests of the authorities” (Garland, 1997, p. 191).

The moulding of self-responsible subjects through techniques of the self, can also be explained with reference to the resilience training that army officers and soldiers receive in the U.S. and other western countries, as part of a new security strategy adopted in the wake of the terrorist events on 11 September, 2001 (O’Malley, 2010). This resilience training focuses on critical events that we cannot predict, but to which we can adapt to by building-up our capacity to respond (O’Malley, 2004; Lentzos and Rose, 2009). Unpredictability is not seen as an uncontrollable element of human experience, but, rather, is thematised and administered in order to foresee or imagine specific scenarios for which one can be prepared, then:

[...] resilience implies a systematic, widespread, organizational, structural and personal strengthening of subjective and material arrangements so as to be better able to anticipate and tolerate disturbances in complex worlds without collapse, to withstand shocks and to rebuild as necessary (Lentzos & Rose, 2009, p. 243).

These resilience building regimen aim to replace counterproductive, self-defeating assumptions with those that will create proactive subjects, with a risk-taking attitude that considers uncertainty as opportunity (O’Malley, 2010). As such, military forces have

been providing resilience training to soldiers, so they can learn new skills that will allow them to overcome different and complex emergent scenarios. The set of skills developed through these regimens are based on the use of smaller and mobile formations, being flexible and innovative, as well as encouraging autonomy and responsibility for individual soldiers.

Current discourses of an emerging form of governmentality through resilience have also been mobilised (O'Malley, 2010, 2012; Welsh, 2013) through governmental technologies of neoliberalism, such as governing at a distance, technologies of responsabilisation, and practices of subjectification that aim to produce prudent, autonomous and entrepreneurial subjects in a world of naturalised uncertainty and crisis (Larner, 2011 in Welsh, 2013, p. 2). Academic literature portrays resilience as a technology that is applied top down in order to create subjectivities that are aligned to governmental aims. Resilience is framed in a discourse of individuality: the responsible individual secures him or herself through the moral techniques of insurance, the management of his or her penal activities and through the training needed to adapt to new and uncertain scenarios. This way of thinking about resilience will only facilitate what Foucault has called the "right disposition of things", in the sense that it preserves the rationalities of power rather than challenging them.

According to Brand and Jax (2007), the vague and malleable meaning of resilience means that it can serve as an interdisciplinary boundary object that can be mobilised across a variety of epistemic communities. In this sense, resilience can be understood as a perspective for analysing socio-ecological systems, as a skill to be developed by communities to withstand shock after a natural disaster, or as a characteristic of homeland security strategies. In the case of the kind of uncertainty generated after the unexpected absence of a loved one, Pauline Boss (2013, p. 286) defines resilience as the "tolerance for long periods of ambiguity, and the ability to thrive and even grow stronger despite the

lack of clarity about a loved one's absence or presence. It means managing the anxiety that comes with not knowing". One way in which resilience is achieved is through practices of search and the management of one's emotions. That is, through the government of one's self.

However, as has been explored elsewhere in regards to critical approaches the practices of the self (Carvalho, 2013; Voruz, 2011), an understanding of "technologies of the self" as the "cultivation of subjectivities in specific forms, aligned to specific governmental aims" (Garland, 1997, p. 175) – that is, in its creation of docile bodies through confession, prison, the army, psychiatry, etc., would be reductive. Rather, a critical analysis of practices of the self argues for an understanding of "techniques of the self" as spaces where opportunities are created for each subject to "find ways in which s/he can be best less governed, and act in the world in such a ways as to produce similar effects for others" (Voruz, 2011, p. 59). Following this, Voruz (2011, p. 60) argues that there are two modalities of the relation between subjectivity and truth at play in the western modes of the constitution of being, and they are not equally desirable: "one produces *obedient* subjects, the other *autonomous* subjects". The construction of autonomous subjects and the instrumentalisation of one's very own being can be thought otherwise: In the case of Mexico, for example, citizens are transforming themselves in order to find their loved ones. They are learning new skills (e.g. forensics), and are drawing on technologies such as writing, numbering, GPS location tools and crime network analyses. In doing so, the subjectivation of the self fails to fit pre-established governmental aims and, thus, new subjectivities emerge when practices of search blur the boundaries between "experts" and "non-experts".

Citizens' Forensic Work in Mexico: 'Searching for them we find ourselves'¹²⁵

On the night of 11 January, 2011, the last day of the Christmas Holidays, Letty, a university lecturer, and her two sons, Roy and Richie, were watching television at their home in Nuevo Leon, in the northern part of Mexico. Roy was then in his second term in Modern Languages at the local University, and Richie was finishing high school. While preparing to go to sleep, they heard someone knocking at their garage door. As the knocking grew louder, Letty and her sons grew scared, and decided to walk towards the garage door to see who was calling. But before they could reach the main door, a group of heavily armed men broke into their home.

Letty remembered later that they were wearing camouflaged uniforms and protective vests with a local police insignia "*Police from Escobedo*" —one of the municipalities in Nuevo Leon. The armed men took all of her valuables from the house: jewellery, cameras, computers, mobile phones, TVs, and their new car. Just before leaving, and after Letty and her sons had been heavily beaten, one of the gang members shouted: "who's the oldest? Who's the oldest?!!" They took Richie thinking he was the oldest son, but Roy (who was being held by one of the armed men) yelled: "it's me! Take me! I'm the oldest."

Fearing that the local police had been involved in the abduction of her son, Letty never reported the incident to the local police station but, rather, contacted the army. Since 2006, the government has led a so-called 'War against Drugs', and, as part of its security strategy, has deployed military forces in some states in the country where local police force are corrupted and have been found to be colluding with organised crime groups. During the first days after Roy's abduction, Letty remembers feeling "in shock", "frozen"

¹²⁵ 'Searching for them we found ourselves' or '*Buscandolos nos encontramos*' is a phrase that Letty Roy uses frequently when talking about citizens' practices of search (Informal talk with Letty Roy, September 2016).

by the situation that she and her family had experienced. The day after Roy's abduction, Letty received a ransom call. The kidnappers promised to return Roy to his family, as soon as they received the demanded sum. Letty and her family quickly gathered the money and paid the ransom, but Roy has still not been returned home.

After a couple of months, Letty realised that the army was neither searching for Roy nor gathering information on his abduction. In the aftermath of Roy's disappearance, and having experienced violence from both organised criminals and the state, Letty decided to start her own search. Following the advice of an army officer, and without any prior knowledge of computer systems, she paid for a global positioning system (GPS) to be installed in one of the mobile phones that the kidnappers had stolen in order to pinpoint the location of the calls made from the device. Using the GPS software, and analysing antenna positions and mobile phone mast locations, Letty successfully tracked the activity of the phone numbers from which she had receiving calls. As she told me in 2012:

I didn't know how to use a computer. I mean, just e-mails and that kind of stuff. But then, along with my husband and family, we started following the signal coming from the mobile phones that were in use. We tracked the red dots on the computer, and then with the help of a local map we spent our time deciphering the exact roads and houses where the red dots were coming from. In the end, we collected sixteen well identified addresses and took nearly 80 photographs —via satellite— through the computer. We made it [marked it] very clear, with big red arrows to avoid confusion and to clearly show the houses where the signals were coming from. (Interview with Letty, 2012.)

Letty and her family gathered information enabling her to pinpoint the specific locations where the ransom calls were made. She identified the spaces where the mobile phone signal was active during the night, or during long periods of time, as a way of determining where the criminals lived or spent the majority of their time. While trying to locate specific addresses Letty not only used 'Google maps', but also *Roji Guide (Guia Roji)*, a

detailed map of the state of Nuevo Leon produced by a private Mexican cartography company.¹²⁶ Armed with maps, photographs and her call log analysis, Letty went to the military forces and asked them to analyse the information she provided, and to visit some of the places that she had suggested in her materials in order to locate Roy. After insisting several times, the officers agreed to visit some of these locations. In one location the army found three kidnapped victims and two captors, along with drugs, guns and vehicles that had been reported as “stolen”. Letty continued paying for the mobile phone bills and GPS software for over two years so that she could gather information on where these individuals were calling from, and whom they were calling. She had access to a monthly report of “logged calls”. During our conversations, Letty explained to me how she colour-coded the logs, first dividing the phone numbers geographically according to municipality and, later, ordering them according to their frequency, allowing her to use this information to generate highly specific locations. In some instances, Letty would call the numbers herself to investigate who they belonged to. Some of the numbers belonged to pharmacies, local shops, and mobile phone repair and maintenance services, etc.

Date	Telephone Number	City	Time	Recurrence ¹²⁷
11/01/2011	0052515510072758	Nuevo Leon	03:11	R1
11/01/2011	0052515510072758	Santa Catarina	00:20	R2
11/01/2011	0052515510072758	Monterrey	02:22	R2
12/01/2011	0052553251112025	Monterrey	01:20	R3
12/01/2011	0052882312850052	Laredo, Tamaulipas	01:10	R4
12/01/2011	0052551238966654	Nuevo Leon	11:00	R1
13/01/2011	0052551238966654	Nuevo Leon	01:50	R1

Figure 6 Letty's 'Call Log' analysis

¹²⁶ *Guía Roji (Roji Guide)* is a cartography company based in Mexico City. *Guía Roji* was created in 1928 by Mr. Joaquín Palacios Roji Lara who travelled on foot through Mexico City to gather detailed information on the city, thus creating the first public available Mexico City map with an index on every street. However, as the city has kept growing, suburban areas in the surrounding State of Mexico have been added to the map. Since its creation in 1928, the company has effectively mapped several states within Mexico and continues to offer them to the general public. *Guía Roji* updates its maps every year. Information from: <http://www.guiaroji.com.mx/> (Accessed: 28 March, 2017).

¹²⁷ By ‘recurrence’ I mean how often calls were received from this number.

The use and analysis of mobile networks is a recurrent strategy used by families in Mexico. Families' engagement with this type of data is extensive and diverse. It was used to follow and retrace their loved ones' journeys, such as in Alejandro's case; to triangulate information from different mobile antennas locations and establish a specific area where to start a search, or as in Letty's case it was used to understand the behaviours of those who had taken Roy away, as she once told me: "by tracing the calls we knew the mobile phone location, but that didn't necessarily mean that we knew where Roy was"¹²⁸

'Radiography of Disappearances'

The creation and analysis of what families have termed a 'radiography of disappearances' is another way in which maps and geographic information have been used to locate loved ones. This analytic tool gathers information collected from newspaper articles, online searches, and knowledge of the drug cartels operating in the area where their loved one was last seen— this 'radiography' includes descriptions of the techniques used by the organised crime to kill and 'disappeared' persons, spatial analysis of their geographical zone of influence, analysis of case files containing information/confessions from gang members, and sketches with information on the location of clandestine burials. Families put together this data to create a 'radiography of the disappearance' from the place where, presumably, their loved one disappeared.

The use of this analytical tool provides families with further information on *where* to search, especially in learning about the different strategies that cartels or local police forces employ to murder and disappear their victims. For instance, after accessing and analysing this information, Alejandro's family are now focusing their search strategies

¹²⁸ 'Rastreando las llamadas sabíamos dónde estaban los celulares, pero eso necesariamente no nos daría la ubicación de Roy'. Informal chat with Letty, September 2014.

on the identification of human remains found in clandestine burials that have been discovered near the area where Alejandro was last seen.

Numbering, Ordering and Numbers

Foucault (1988, p. 151) has analysed the important role or “political arithmetic” or statistics as the knowledge gathered by the state and “the knowledge of different states’ respective forces”. Families are aware of the political dimensions of numbers and statistics particularly in cases where state denials aim to obscure the violence practiced against its population. It is only due to the constant work of families that the number of victims of disappearance are now discussed in public forums. Thus, numbers played an important role in my fieldwork with families in Mexico. The families I interviewed emphasised that a number does not necessarily speak of the singularity of their loved one (similar to Edkins’ argument that technologies and numbers miss the “person-as-such”). Nonetheless, the families also highlighted the importance of their disappeared family member to be included in lists, to be (ac)counted for. Further, as I showed numbers can be powerful technologies when used against the state’s denial of disappearances and violence in the country (see, for example, how the ‘The List’, as a citizen-driven technology, was used to highlight the state’s epistemological ignorance of the disappearances of women in Chihuahua). When I first arrived in Mexico City in 2014, there was a controversy over the numbers of disappeared persons that the government acknowledged. Moreover, governmental institutions referred to the disappeared as ‘not located’ or ‘lost’ person cases. As part of the strategy employed by the state to verify the data they held on ‘lost’ or ‘not located’ persons, the General Prosecutor’s Office rang each family home to ask whether the missing person had returned home. Most families

found this practice inadmissible. It was another way in which the state demonstrated its inability to keep updated records or share information across its institutions.

Araceli's case demonstrates another way that families strategically used numbers and numbering. Araceli, a former receptionist, has been looking for her son, Luis Angel, since 2009. Luis Angel was a federal police officer who disappeared while his team was deployed in the state of Michoacán. Michoacán had, at that time, been experiencing high levels of violence and its local police forces had been co-opted by organised crime. Thus, federal police brigades were sent to protect the population, including Luis Angel. Araceli knew that something was wrong when Luis Angel failed to communicate with her two days into his assignment at Michoacán. Araceli reported Luis Angel's absence to his superiors, but she was ignored. Araceli soon realised that no one was looking for Luis Angel, and that the Federal Police, a governmental organisation, was refusing to acknowledge Luis Angel's absence.

In order to search for Luis Angel, Araceli learnt the "*línea de mando*", that is to say: how hierarchies work inside Federal Police institutions in order to ascertain who gave the operative command to send Luis Angel and his team to Michoacán. Meanwhile, Araceli sent formal letters of complaint to different departments within the Federal Police, held meetings with high ranking officials, and was in constant communication via email with the organisation. Despite this, two years after Luis Angel's disappearance, she received a formal "order of presence" requesting that Luis Angel present himself to the Federal Police headquarters to explain his absence at the most recent training sessions. If he failed to do, Araceli was informed in the letter, Luis Angel would be dismissed from his position. When Araceli visited the Federal Police headquarters asking for an explanation for the letter she had received, she discovered that Luis Angel's case file was incomplete. There was no documentation attesting that he and his team had been sent to Michoacán, or that a formal search for him had been instigated. Furthermore, there were no records

of some of Araceli's meetings with Federal Police officers. From that moment, Araceli understood that she would have to take administrative responsibility for the case, in order to safeguard the integrity of the case file. She would have to ensure that all meetings were recorded, and that Luis Angel's case file be numbered to prevent important documentation becoming 'lost'. She decided to create a parallel/independent case file, where she kept copy of each email sent and received, and recorded the minutiae of every meeting she held, etc.

As I explained previously, the independent analysis that the EAAF carried out on the status of forensic science in the state of Chihuahua stated that the state's basic forensic investigative work was being conducted inadequately, and that case files were being corrupted or mishandled. In this case, instead of depending on international expert assistance, Araceli began conducting her own forensic work by re-tracing her meetings and the initial steps she took toward locating Luis Angel. During my fieldwork in Mexico, Araceli showed me her personal archive where she kept Luis Angel's case file perfectly numbered, as well as the notebooks she had created while gathering data on her son's disappearance. Among her notes, forensic data such as dates, phone numbers, police records, and maps of possible clandestine burials coexist with private messages and reflexions on her family, and her experience of Luis Angel's absence.

The cases presented above, make visible the different ways in which numbers and ordering constitute important sites of forensic knowledge production and public contestation.¹²⁹ Further, writing has become a recurrent practice for families to decipher the self, amidst everyday experiences of fear and uncertainty.

¹²⁹ See also my discussion on Chapter Four about "The List" of disappeared women in Chihuahua collected by family members.

As Foucault notes, one of the ways in which one can “take care of the self” is through writing. Writing is important not only in terms of gaining knowledge of the self, but for traditional political life. “Writing”, Foucault argues, “was also important in the culture of taking care of oneself to be reread, writing treatises and letters to friends to help them, and keeping notebooks in order to reactivate for oneself the truths one needed” (Foucault, 1988, p. 27). For Letty, writing has become not only a way to take care of herself and to reflect on her life after Roy’s abduction, but has also enabled her to develop a protocol for finding disappeared persons. With something of a shy tone in her voice Letty told me: “well, it is not a protocol [...] it is something I just *imagine* [...] you know, crucial steps I imagine we should take while looking for someone that has gone missing” (Interview with Letty 2013, my emphasis). Memory, imagination and the capacity to comprehend and synthesize information about what has led to the disappearance of a family member constitutes an indispensable resource for the identification of victims of violence (Wagner 2008).

As Sara Wagner (2008) explains in relation to families of missing persons in Bosnia, memory and imagination come into play during the forensic process of victim identification. For Wagner, the forensic process must be considered as both a scientific as well as a social process. Wagner explains that the knowledge of families and the knowledge of experts run along parallel roads that eventually converge when scientific processes have identified a possible DNA “match”. Once the scientific process of DNA matching has been completed, complemented by and contrasted with families’ recollections of the missing, both knowledges come together as the families accept the identification made by the authorities, and the process of burial of the remains begins.

However, families in Mexico do not typically trust in the authorities’ identification processes and, thus, have been organising themselves to provide the certainty that the state forensic practices cannot. In September 2014, after years of mobilising her

knowledge of state administrative practices and forensics, Letty and the organisation she leads, the United Forces for Our Disappeared in Nuevo Leon (*Fuerzas Unidas por Nuestros Desaparecidos en Nuevo Leon*, FUNDENL), conducted the first citizen-led exhumation in Monterrey, in the Northern state of Mexico.¹³⁰ In order to carry out the exhumation, Letty gathered help from the Forensic Anthropology Team of Peru (*Equipo Peruano de Antropología Forense*, EPAF) and from the Mexican NGO, Gobernanza Forense Ciudadana (*Gobernanza Forense Ciudadana*: GFC), in order to audit the process of identifying the human remains of Brenda Damaris Solis and to give certainty to her family. This first citizen-led exhumation was the consequence of years of learning and resisting government denials.

Site Specific Searches

Through their gathering of mobile data, families are able to determine specific locations to begin their searches. In the absence of such detailed information (where there is no mobile data to be analysed, or no traces to follow) families start by looking into ‘obvious’ spaces. These usually include local hospitals, police stations, fire stations and road assistance offices, or searching for the vehicle in which their loved one was travelling using the national registry of vehicles. There are other sites where families conduct their searches, especially after experiencing the violence and insecurity in the country. Some families decide to visit mortuaries to look for unidentified bodies that had arrived with similar characteristics to that of their loved ones. As Loretta explained to me,

I even decided to visit the local medical examiner’s office in an effort to see if my daughter was there....I asked several times for a body with her characteristics, her hair, height, age...but they would tell me that no one with those physical details was there...They wouldn’t allow me to

¹³⁰ Fuerzas Unidas por Nuestros Desaparecidos en Nuevo Leon.

see the files with the photos they kept of each unidentified body...several months passed and I still went there at least once a week asking for my daughter...One day one woman who worked there gave me permission to flip through the case files...and then I saw her, my daughter had been in the morgue all that time and they hadn't told me! (Interview with Loretta, August 2014.)

Loretta's case is not unique. While in Mexico, I came across other cases where families, especially mothers, had visited local medical examiners' offices asking after bodies that had been entered for analysis with similar characteristics to those of their disappeared kin. These relatives were consistently mistreated by the personnel at these institutions, since the examiners seemed to feel that their performance was being closely evaluated during the visits of these forensic citizens. However, these types of engagements with forensic authorities were occasionally productive. As one forensic specialist told me, every time s/he met with a family member wanting to look at case files and photos of unidentified bodies, s/he used to "teach" them *where* and *how* to look for similarities between their loved ones and the unidentified bodies. Drawing on years of expertise in forensic techniques, s/he explained that it was important to look at a person's teeth. Families had to remember any dental treatment that their loved one may have had, such as metal crowns, dental implants, or if the person had any missing teeth. Having knowledge of *where* and *how* to look for individualising characteristics gave families some direction in continuing their searches. Acquiring this knowledge is particularly important in Mexico, where most people do not have access to free dental care. Thus, most of the population do not have dental records or X-rays that could later be used for identification purposes.

Drones to reach ‘dangerous/prohibited/unreachable spaces

Haven’t I told you? About our new toy? [...] We collect money, everyone chips in and we bought a drone. It is something we wanted for a long time to help us in our searches, because sometimes the roads are too rocky, or we want to look in vacant lots that are private property and we can’t get access to them, so we needed a drone to be able to see. We are still learning how to use it. (Letty, personal communication, September 2016.)

Letty’s idea to use drones to extend the scope of her search arose after a discussion with Fernando on the suitability of drones in his own practices of search.¹³¹ Since 2012, Letty has acted as the leader of FUNDENL, a civil society organisation that offers support to families of disappeared persons in the state of Nuevo Leon. Letty told me about her new “toy”, and how she and other families from FUNDENL have recently organised search brigades to locate clandestine burial sites. The group has received training from GRUPO VIDA, a civil society organisation from the northern city of Torreon, in the state of Coahuila, who have been successful in locating clandestine mass graves and recovering dead bodies from the outskirts of the city.¹³²

Every time that Letty organised a search, she invited the local public prosecutor to witness the process and to learn “how things get done”. The public prosecutor can, then, also

¹³¹ Fernando has been looking for his son since 2007. He is the leader and founding member of the organisation “United Association for the Disappeared in Tijuana” (“Asociación Unidos por los Desaparecidos en Tijuana”). Through the analysis of the information he has collected, Fernando organises citizen searches in different sites where the existence of clandestine mass graves has been signalled by members of the public or former members of organised crime. Fernando visits these places; sometimes he is accompanied by other members of the association. Fernando showed me how he taps the ground with his foot when he is looking for ground disturbances or softness, a typical feature of possible clandestine mass graves. Then he kneels down and smells the soil, he explains that human bodies that are in a decomposition process have a very particular odour that can be easily recognised. “When you are looking for dead bodies you can see them everywhere: everything looks suspicious. This is a matter of faith [...] if it was up to the [forensic] technician’s decision we would have been gone by now [since] these premises were checked before. But my experience [while looking for mass graves] in other premises tells me that we have to verify the same place four or five times. On one occasion we found organic tissue on the fifth revisit. In these cases, listening to your guts is crucial (Ocegueda in Mendoza 2012; Interview with Fernando 2012; 2014).

¹³² “GRUPO VIDA” was founded by Silvia Ortiz and Oscar Sanchez Viesca, parents of Fanny, who disappeared when travelling back home from school in November 2004. At the time of her disappearance, Fanny was sixteen-years old. They started to replicate the efforts of civil society organisations in Iguala after the disappearance of the 43 students.

collect any traces (either personal effects or bone fragments) that the group may find. During their searches, the group has encountered areas that have been difficult or dangerous to reach, forcing them to halt their activities. But now, with their drone, the group is able to access spaces that were previously “out of sight”. Letty is keen to visit a specific site in an industrialized area of Monterrey. According to the data she has collected from other disappearance cases occurring in a similar timeframe to Roy’s, she suspects that there may be clandestine burials in an area of the city that has recently been renovated. Thus, she plans to compare historical Google Earth images of the site with current images that she is gathering via drone (Field Notes, September 2016).

Letty is not unique in her use of drones in her searches. Lucia and Don Alfonso have also made use of this technology. They requested the Federal Police to use a small drone to hover over a property where Don Alfonso’s data mining analysis signalled that Alejandro, or other people who disappeared in the area, might have been held captive. The authorities agreed to use a small drone, but it was shot down by “someone” on the ground. Later Don Alfonso and Lucia hired the private services of a bigger, non-tripulated aircraft to take photos of the property, but when they gave the company the specific location to be scrutinised, they decided not to take on the job. Now even bigger drones are shot down. (Field Notes, August 2014)

Graciela also uses drones in her searches. She is looking for her daughter, her brother and two nephews who disappeared when returning home from a holiday in the U.S. Graciela wants to ensure that some particular areas around the main highway, from which she received the last call from her brother, are checked regularly for any sighting of clothes, clandestine burials, or the vehicle in which her family was traveling— which has yet to be found. Through experience, Graciela has learnt that drone mapping has to be undertaken strategically, since it is common for the authorities to make false claims that they have used a drone to gather information. Graciela asked the authority to use a drone,

with a vehicle on the ground following its movements, and pressed the operators to make sure that every area was covered. She is still looking for her family.

Most of the families I interviewed have been searching for their loved ones for at least two years. They explained to me how their lives changed the moment that their loved one disappeared: how they learnt to speak in public forums, to use computers, and to understand how the criminal justice system operates in order to resist the government's dismissal of their cases. For some, these search practices have extended for over ten years. As Maria told me once "I don't know in which moment I got old" (Field Notes, 2014-2015). The changes in their search strategies can be explained by the experiences they have gathered as part of this process, their constant dialectic dances between themselves and the forensic materialities they have encountered, as well as, the sharing of forensic knowledge between families. As Tim Ingold argues, movement is knowing: "The integration of knowledge, does not take place 'up' the levels of a classificatory hierarchy, but 'along' the paths that take people from place to place within the matrix of their travelling" (2009, p. 199). By re-tracing the movements of their absent loved ones, families in Mexico are integrating knowledge as they go along, and adjusting and 'fine-tuning' their movements as their journeys of transformation unfold.

Concluding Remarks

From visiting local mortuaries to patrolling vacant lots and properties, from organising 'search brigades' in the mountain ranges and secluded areas of the city, to looking for clandestine mass graves, all of these have been regular activities carried out by groups of families in Mexico. These experiences highlight not only how citizens closely evaluate

state forensic practices, but also how they have been involved in the production of forensic knowledge.

As described in this thesis, families in Mexico are using diverse strategies in order to locate their loved ones. Some of these strategies are implemented alongside police officers and local prosecutors, but some others are solely private endeavours. Following on the discussion in Chapter II (on Forensis) on the idea of ‘dances of agency’, where knowledge is produced via the dialectic between the agency of human and non-humans, we can see how, in these practices, the dialectic movement between *technologies* (such as drones, lists, numbers, etc.); *those looking for disappeared persons* (either family members or the police) and *the disappeared* are enmeshed in dances of agency that produce forensic knowledge. Further, as I have shown, it is not only the analysis of isolated cases that produces forensic knowledge; the sharing of information between families and organisations is crucial. As Norma explains in the quotation at the beginning of this chapter, we need to stop searching for the disappeared via individual cases, i.e. *vertically*, and we need start analysing and using information *horizontally*. This echoes Ingold’s approach to knowledge-making practices that occur not through the piling up of categories, but through developing knowledge by “moving along”.

Families who participate in search strategies continuously receive death threats. Their family homes or offices have been broken into, with computers stolen. They know that their lives are in danger every time they go out and search. Almost all of the families I have interviewed were accompanied by two or three bodyguards assigned by the General Attorney. Some also carried panic buttons that could be activated in case of emergency. However, as one of the families told me, they have tested the button several times, and did not receive the promised help.

Thinking about these transformations as technologies of the self (Foucault, 1998) allows me to see citizens' approaches to search as a practice of self-resaping in both terms: in terms of the forensic knowledge there are acquiring and how their identity change (e.g. from *maquila* worker to lawyer), but also in emotional terms, with internal/external reconfigurations that the practice of each technique implies. As Foucault wrote, a "certain mode of training and modification of individuals, not only in the obvious sense of acquiring certain skills but also in the sense of acquiring *certain attitudes*" (Foucault, 1988, p. 18, my emphasis).

When talking about citizens' practices of search, Letty explained to me that there is a distinction between *search* and *investigation*. *Search* entails the activities and strategies geared towards locating a disappeared person either dead or alive. *Investigation* is the process of finding the person(s) responsible for committing the crime and the criminal processes that should follow. According to Letty, civil society organisations and families have decided to make a clear distinction between these two concepts in order to highlight their advocacy work and the state's inability to deal with disappearances cases. These groups soon realised that efforts to show the states' negligence put pressure on police officers to quickly detain persons and close cases, using the media to publicize their work and effectiveness. No further effort, for cases dealt with in this way, would be made to locate the disappeared person. As a result, these groups identified the need to support both search and criminal investigation processes, especially since authorities had been known to detain innocent people.¹³³

During my fieldwork I realised that state authorities make similar distinctions between *search* and *investigation*, but these difference are found more in the robustness of the practice. In this sense, state experts conduct *scientific investigations*, while families would

¹³³ See, for example, Norma's case, and the discussions around the Cotton Field case in Chapter 4.

be seen “only” to *search*. In the next chapter, I analyse precisely the differences between the state’s and families’ search practices by emphasising spaces where citizen’ forensic knowledge meets “expert” knowledge, and investigating how these boundaries are enacted, particularly by analysing who collects data and who is allowed to speak in the *forum*.

Interlude IV

The Mortuary

Only a short period of time had passed before I experienced what it was like to see the EAAF working in the amphitheatre. It was practice day, so I was heading down to the amphitheatre, along with fifteen undergraduate students. For our teacher it was to be a very “interesting” day, since the day before, several severed body parts were found in eleven plastic bags at one of the subway stations in Mexico City, which had just arrived at the laboratory for analysis. The Medical Examiners at INCIFO had spent a great deal of time trying to re-construct the bodies, attaching each body part to their original owner. According to my experienced teacher, who had worked at INCIFO for over 35 years, this was not a regular scene for the capital city. This violence could, perhaps, have been the result of a turf war being fought between local gangs, since only that week several bodies of young men had been brought to the mortuary. After a few words of advice — “you don’t have to look at the severed head if you don’t want to” — we entered the amphitheatre on the ground floor of the building. The smell of dead bodies was stronger than during our previous visits. We were all wearing our regular clothes, with a white lab coat on top. An item that was indispensable for practice days were our regular kitchen gloves, with nitrile gloves worn underneath. The nitrile gloves were thinner than the kitchen gloves, which allowed us to feel more. After all, on practice days it was all about touching and analysing dead bodies. [...]

Our humble gear — casual clothes, kitchen gloves and white lab coats — contrasted starkly with the EAAF’s white coveralls, shoe covers and protective masks. They looked at us, said hello, and continued their work. In accordance with what I had been told by medical examiners at INCIFO, the EAAF close off half of the amphitheatre to conduct their investigations. No one was allowed to enter. (Field Notes, May, 2014.)

Chapter Seven: On Authority, Boundaries and Expertise

This chapter explores the boundaries that emerge when families' practices of search challenge the pre-established role assigned to family members during investigations. Ordinarily, families are considered to have passive role as yielders of (bio)information. This can include providing DNA samples to basic knowledge about the disappeared person, or providing what is also known as a character witness (e.g. by detailing the known preferences, routines and habits of the missing person). Generally, boundaries between "expert" and "lay" knowledge emerge when the "right order of things" is challenged, as when families organised search squads to uncover tens of clandestine mass graves in the southern state of Guerrero, Mexico, or when I, a social scientist, was wearing a lab coat while doing ethnographic work at INCIFO. While at INCIFO I noted other types of more institutionalised boundaries linked to routines that are designed to be crossed in order to gain expertise that is, then, understood by others. I was, for instance, encouraged to touch dead bodies in the surgical amphitheatre where INCIFO conducts autopsies as a sign of my forensic expertise.

Analysing the spaces where these boundaries emerge delineates the activities and knowledges that families are allowed to engage with while searching for their loved ones. Moreover, these boundaries shed light onto the struggle to determine who and what is allowed to speak in the forum, collect forensic data and create narratives about what happens to the disappeared in Mexico. This chapter argues for a feminist practice of forensics. This feminist forensics emphasises the notion of *forensis* as forum, as the practice of opening up of spaces for different understandings of justice and truth that are not necessarily linked to courtroom proceedings.

Case Constructionism and Police Search Strategies

The analysis of disappearance cases entails a narrative construction that brings people, objects and places together in a “plausible chronology” that seeks to explain what happened to the absent person and to attempt to decipher why the individual disappeared (Innes, 2002b, p. 682). This narrative construction of the case is usually assembled by official institutions: either institutions that are part of the state (i.e. police officers), or international organisations collaborating with state institutions, such as the ICRC or the ICMP. However, as I have shown throughout this thesis, the narrative construction of a disappearance case can also be constructed and presented by the families of the disappeared.

This model of “case constructionism” (McConville, *et al.*, 1991) is not neutral: the use of narrative tools constrains and directs its formation. The construction of “meanings” around the objects collected and the narrative produced from the associations between them is based upon networks of interpretation, inference and definition (Innes, 2000, p. 683). This means that the data collected from these cases will be encoded and used to establish a series of interpretations, classifications and inferences about the event. Using this data, police investigators assemble an account of events and, consequently, decide how the case should be dealt with legally (Innes, 2000, p. 672). During the construction of the case, the author’s representation of the world is reflexively oriented by their sense of “audience” and the expectations and interests of that audience, as exhibited as a modality of discursive power (Rabinow, 1986 in Innes, 2000, p. 683). In missing persons cases, these “audiences” can be senior police officers, family members of the victims, the general public, state institutions and, in some high profile cases, the international community — international organisations such as the IACHR and the U.N. played roles in the Cotton Field Case, for instance. Police forces, and those in charge of investigations, must, then, be aware of the “high level of reputational risk” associated with missing

person cases and the dangers of not executing search strategies effectively (Fyfe *et al.*, 2015, pp. 422-423).

The development of these search strategies attest to the relational dynamics of the constructed narrative and from these relations “search assemblages” are designed in an attempt to combine “actors, agencies, knowledges, technologies” and publics into particular assemblages (Yarwood, 2010, p. 269). However, as Parr and Fyfe (2013, p. 628) argue, there are some “types” of knowledges that may be considered “outside” of the usual informational parameters of search, or may be missed by particular data-capture processes. These knowledges are usually those held or imagined by the family members of those who have been disappeared. Therefore, exploring the roles and limitations of “how multiple actors report, discuss, imagine and act on possible geographies of absence”, and the search assemblages that these geographies produce, sheds light onto the politics embedded in searching strategies and can serve to modify these “search assemblages *in practice*” (Parr and Fyfe, 2013, p. 628, my emphasis).

For a consideration of how search assemblages can be altered in practice to incorporate the search knowledges of families, the following section considers the ways in which family search strategies in Argentina were included in “formal” search strategies in order to locate and identify the “living disappeared” (Vaisman, 2014, p. 391): those children born in captivity to mothers who had been detained and disappeared during the dictatorship, were forcibly abducted and later raised by military families as their own offspring.

Search Strategies in Argentina

From 1976 to 1983 Argentina was under the control of a military dictatorship. The military government left approximately 30,000 killed and disappeared persons in its wake

(CONADEP, 2003). The majority of the disappeared were young people, academics and activists: those who had actively opposed the government's attempt to control its population through a strategy of terror, which aimed to eradicate the perceived threat of communism. According to data from the National Commission on Disappeared Persons (CONADEP, 2003), the military junta set up 345 clandestine detention centres where extrajudicial executions and tortures were carried out (Ranalleti, 2014). The fate of those who entered these detention centres, or "schools" as the military called them, was unknown, and left thousands of families with no idea of the whereabouts of their loved ones. Some of the young women who disappeared were pregnant at the time of their detention. Witness statements that were collected after the democratic government was installed in Argentina indicated that some of those babies were born in captivity and were then given to military families to be raised. Approximately 500 new-born babies and young children were abducted (Vaisman, 2014; Smith, 2016). With this knowledge, the Grandmothers of the Plaza de Mayo, a human rights organisation founded in 1977, concentrated their search efforts on "locating their missing grandchildren born in captivity or disappeared alongside their parents" (Smith, 2016, p. 5).

In order to locate their missing grandchildren, the Grandmothers of the Plaza de Mayo gathered information on disappeared persons and sightings of "suspicious children" inside military family homes. Lindsay Smith (2016) explains that this notion of the "suspicious child" derives from "neighbours' accounts of a woman who had never been pregnant, who went away for a few weeks and returned with a baby that she claimed as her own" (2016, p. 5). Some of this information was gathered by the Grandmothers during their protests in front of the presidential palace (*La Casa Rosada*), where members of the public would approach them with information on disappearances and "suspicious child" sightings. This was one of the strategies used to gather and organise citizen-led datasets that would provide information on disappearances independent from governmental data

that, at the time, denied the existence of the disappeared. Once enough data had been gathered, the Grandmothers would visit the family homes under suspicion. They would knock at the door and wait for the children who lived there, looking for any resemblance to their own missing children (Smith, 2016). As Smith explains:

[the Grandmothers] would go to the street where the family lived and later several Grandmothers got the idea of going to the house with advertisements for products for babies...we would ring the doorbell, recommend the product, and then ask if there were babies in the house. (Smith, 2016, p. 5.)

The search strategy developed by the Grandmothers helped them in the process of gathering information on suspicious homes. Through the passing of time and their constant engagement with the materiality of the absences of their grandchildren, the Grandmothers brought their “outside” search practices to bear on more intimate spaces such as family homes and their own understanding of kinship. Once the period known as the ‘Dirty War’ had ended and democratic institutions were installed in Argentina, the American Association for the Advancement of Science (AAAS) provided the government with forensic technical support in order to conduct the exhumation and identification of the bodies found in unmarked graves in local cemeteries. Furthermore, contact with international experts and support from Raul Alfonsín’s democratic government allowed the Grandmothers to visit several countries and to seek the help of geneticists and other experts in their attempts to locate their grandchildren.

In 1984, the Grandmothers of the Plaza de Mayo became the “first group worldwide to organise around genetic identification technologies to prove relatedness in the absence of the parental generation” (Wagner & Smith, 2007, p. 35). The group developed a new forensic genetic technique known as the “grandparenthood index” (Madariaga, 2008). This new technology was created through collaboration between the Grandmothers and

geneticists Victor Penchaszadeh, Mary-Claire King, and Fred Allen.¹³⁴ The grandparenthood index used blood sample analysis from the biological grandparents to establish kinship with their grandchildren without needing blood samples from the “second generation” — the disappeared parents (Smith, 2016). This index has allowed for 121 grandchildren to be identified via genetic technologies that preceded Sir Alec Jeffrey’s DNA “fingerprinting” methods which has, since its inception, become the dominant international method of DNA analysis in assigning paternities and identifying human remains.¹³⁵

The work of the Grandmothers of the Plaza de Mayo and the development of the “grandparenthood index” is considered one of the first scientific tests developed as a result of “layperson advocacy” (Smith, 2016, p. 6). Moreover, the transformation that occurred in Argentina once democratic institutions were in place, as well as the forensic science assemblages that developed as a consequence of the participation of family members, student-activists and international scientists, marked “one of the first interventions by science into human rights” (Smith, 2016, p. 6).

This move towards layperson-driven science occurred within a larger global rise in the role of victim-advocates during the 1990s. For instance, Steve Epstein (1998) documented the work of advocacy groups on the development and understanding of AIDS during the 1990s. Epstein’s work on AIDS activism reaches the conclusion that, through consolidating different forms of credibility, activists can, in certain circumstances, become genuine participants in the construction of scientific knowledge. The knowledge they produce effectively affect changes to both epistemic practices and the therapeutic techniques of medical care (Epstein, 1998, p. 409). Similarly, Rose and Novas (2008)

¹³⁴ Physician who specializes in paediatrics, medical genetics and medical bioethics. He was part of the team that developed the ‘grandparenthood index’ and advised Grandmothers of Plaza de Mayo in the operation of the National DNA Data Bank; Marie-Claire King is Professor of genetics and medicine (Medical Genetics) at the University of Washington; Director of New York’s Blood Centre.

¹³⁵ For more information on Sir Alec Jeffrey innovation see chapter two: *On Forensis*.

discuss the notion of “biological citizenship” to reflect on patients’ collaboration in research development for specific diseases. In the following section I briefly reflect on some STS approaches to citizen participation in science.

STS and Citizens’ Participation in Science

The participation of citizens in science and technology governance has been a widely discussed topic in STS, particularly regarding public participation in clinical trials. Research in this area has shown the ways that citizen groups can provide localised expertise and relevant knowledge to scientific and technological processes when their expertise, though perhaps not gained through formal training, is valued and taken into account (Epstein, 1996; Rose and Novas, 2008; Wynne 1992).

For instance, Adriana Petryna’s (2004) notion of “biological citizenship” delves into the lives of those Chernobyl-Exposed populations in the post-Soviet era who were involved in a process of “gaining of life in the new market economy through illness” (2004, p. 264). In this case, “sufferers” demands for social welfare were based on the “medical, scientific, and legal criteria that recognize injury and compensate for it” (p. 261). According to Petryna, scientists and victims established their own modes of knowledge “related to injury as a means of negotiating public accountability, political power, and further state protections in the form of financial compensation and medical care” (Petryna, 2004, p. 265). In short, the biology of the population who was exposed to nuclear radiation became a resource, a “versatile material through which the state and new populations can be made to appear” (Petryna, 2004, p. 265). Similarly, Rose and Novas (2008) developed the notion of “biological citizenship” to refer to instances where citizens use their

biological components (e.g. their shared genetic condition, such as Huntington's disease) to engage in political economies of hope (PEH). PEH amongst patient groups "seek[s] to act upon the world of science by actively advocating for the development of research about the cure for the illnesses they suffer." PEH constitutes a public forum where the responsibility for the cure is not merely an activity carried out by scientists and doctors, but is embraced by those who have a stake in the suffering the condition brings about. Thus, PEH requires from its participants an "active stance toward the future, and it involves a certain degree of [individual and collective] commitment" (Rose and Novas, 2008, p. 453). According to Rose and Novas (2008), citizen activism and ethical self-formation constitute PEH. This is a matter of "*becoming political*", in which the state plays an active role in transforming/governing these citizens as a "potential resource for the generation of wealth and health" (Rose and Novas, 2008, pp. 457-456, emphasis in original).

In his case study of Cumbrian sheep farmers' responses to scientific knowledge, Brian Wynne (another necessary point of reference in the field of the public understanding of science) suggests that the "unacknowledged reflexive capability of lay people in articulating responses" to scientific expertise is crucially dependent on their construction and renegotiation of social identity (Wynne, 1992, p. 301). Thus, the ways in which laypeople understand and reflect upon the different forms of knowledge that they produce can open up possibilities for change, not only in terms of scientific epistemic practices, but also in the different ways in which, in this case, human absence, is experienced and theoretically understood.

In terms of the public understanding of forensic science, Barbara Prainsack and Martin Kitzberger's research in Austria (2009) analyse prisoners' views on the use of DNA

technologies in criminal investigations. For their interviewees, DNA evidence is seen as ubiquitous, with DNA traces inevitably being left at crime scenes. Whereas DNA technologies were perceived as “impenetrable and intimidating” due to the way in which DNA results are used and presented in trials. Simon Cole’s research (2013) shows how public efforts in the U.S. to shape forensic science into a more Mertonian, hypothesis driven endeavour, fails to account for the specificity of forensic science and its adversarial spirit, as well as the fact that forensics is a science of the particular. In this sense, we can think of forensic work as a form of public science in which “imaginations of the public world, however that is construed, can be taken as integral to scientific knowledge-generation, not simply as afterthoughts” (Wynne, 2005, p. 68). Examples might include the selection of evidence from a crime scene and its subsequent analysis or the construction of genetic populations for forensic analysis (M’Charek, 2008; Schwartz-Marin *et al.*, 2015). In short, “the public” is always enmeshed with “the science” in forensic practice, either via the adversarial procedures of the courtroom, or through the routinized practices of laboratory testing and verification.

As I have shown, STS scholars have long been concerned with the public understanding and democratisation of science. Public accountability, public participation in decision making processes are some of the aspects that are constantly analysed as key matters of the political decisions embedded in scientific research agendas. More recently, efforts to describe public participation in science has been denominated as ‘citizen science’. According to Muki Haklay (2015) citizen science relates to the “scientific work undertaken by members of the general public, often in collaboration with or under the direction of professional scientists and scientific institutions”. According to this approach, while the roles of professional and non-professional participants might not become equal, each of the actors contributions are valued and respected (2015, p. 7-8). Moreover, this approach to citizen science does not assume that the role of scientists will be diminished;

in fact, the public participating in these endeavours values and recognises the role that science and scientists play within citizen science projects. Thus the role of scientists is to move beyond the one-way communication strategy where they use members of the public as “subordinated laborers”(2015, p. 8) and work towards a more active role of the public within research projects.

Haklay (2015, p.14-15) offers a typology of six types of citizen science based on the levels of citizens participation. For instance, in *passive sensing* participants provide a resource they own for automatic sensing. In *volunteer computing*, participants share their unused computing resources to allow scientist to run complex computer models, whereas for *volunteer thinking*, participants contribute with their ability to recognise patterns or analyse information to be used in a scientific project. The *environmental and ecological observation* typology, considers the participation of citizens in the monitoring of environmental pollution and/or specific observations of flora and fauna. In *Participatory sensing* there is a more active involvement of participants in the setting of what data will be collected and analysed. Finally, in *Civic/community science*, the research is driven by a group of participants that identify a common problem and address it using scientific methods and tools. In this type of citizen science activity –also known as bottom-up science, the delimitation of the problem and the process of data collection and analysis is done by “community members or in collaboration with scientists or established laboratories”(Haklay, 2015, p. 15). This type of participatory science practices can often be used to increase the trust of the community in the conclusions of experts about the impacts of traffic or industrial activities. (2015, p. 64)

The cases of citizen science analysed by the literature show that in the global North, there is an over representation of well-educated men as participants of these projects. As Haklay sustains:

“the average participant in citizen science activities – well educated, working in a job that provides enough income and working conditions for ample leisure, and with access to the internet as well as ownership of smartphones” (2015, p. 13)

This situation contrasts with what happens in Mexico, in the sense that the citizens who are engaging with forensic science practices are women, who have little formal education. Additionally, most of the projects described by traditional understanding of citizen science, require a scientist or an institution as a liaison, facilitator and in some cases promotor of citizen science projects. The role of this actor is to validate the information produced by citizens and considers whether it can be useful for decision making processes.

As Prainsack argues (2016, p. 150), many examples of the participation of others than professional scientists in the creation of scientific knowledge can be found mainly within the health domain. It is in these situations where patients and their immediate family members are the most interested persons in trying to find a cure to the disease they suffer. Prainsack also argues that efforts to create a typology of citizen science understand these projects as static— a condition that limits their analytic value; precisely because the dimensions of public participation, and the understandings of the community underpinning these projects are flexible and fluid. (Prainsack 2016, p. 152). In order to attend to the flexibility and fluidity of citizen science projects, Prainsack offers a classification criterion that considers six major themes: coordination, participation, community, evaluation, openness and entrepreneurship.

In terms of *coordination* the aim is to determine who has influence in agenda settings, in the execution of the idea, its evaluation and the afterlife of the results – what can be done with the information gathered as well as any intellectual property issues. In terms of *participation* Prainsack proposes an analysis of the actors that take part of the project, how much training/skills are needed to do so and a consideration of the cultural,

institutional or other differences in perception and framing of the projects' core issues. In regards to *community*, this classification considers the distinct communities that pre-existed the project, as well, as the communities it certainly will develop. In regards to *evaluation*, the decisions of how and by whom 'good' outcomes are evaluated is discussed. *Openness*, relates to the availability of data sets, publications and core knowledge to those non-professionals involved in the project. Finally, in terms of *entrepreneurship*, Prainsack's categorisation of citizen science looks at the sources of funding that these projects might have access to, and critically analyses what is the role and interests of the funders in the project aims.

The extent of the influence of non-scientists in the development of the project speaks to the emancipatory potential of a citizen science project (Prainsack, 2017, p. 154). In this sense, the participation of non-scientists into processes of forensic identification in Argentina that I explored in the section above, can be identified as a traditional example of citizen science project. The participation of the Grandmothers of Plaza de Mayo in the initial stages of the grandparenthood index research, helped the research to gain impulse, but the development of the research, its implementation and the collection of samples was carried out by scientists. However, the situation in Mexico is somehow different. In first instance the collection of forensic data was not supported nor initiated by scientists, on the contrary, citizens' collection of forensic data was an activity deliberately designed to contravene forensic scientists and state institutions. For an example of this see my analysis of the Campo Algodonero case and in the different practices of data collection that I have explored throughout this thesis.

While most of the literature around citizen science has concentrated around citizen participation in health related projects, astronomy, birdwatching, or participatory mapping, there has not been an analysis of citizen forensic science. As Prainsack argues,

there is an important question, yet to be answered, about how citizen science represents a significant change in how we assess and enact relevant expertise and authority when we create scientific knowledge, and how it does or should affect the ways in which we discuss and support participation in science. The processes I have described throughout this thesis are a first insight into how citizen forensic knowledge can be otherwise understood. A feminist approach to citizen led forensic science does not want to understand the ‘usefulness’ of citizen science projects within the schemes and categories already provided by scientists, but to shed light into different ways of doing science than those already provided for. The forensic citizenship I have described so far is different from conceptions of biological citizenship in two ways: First, it is created against the governmental experts rather than promoted by them, and second, it operates in a scenario characterised by violence and lack of rule of law in which the victims of violence are the ones collecting, organising and mobilising data to uncover the atrocities committed by the state and the organised crime.

In what follows, I describe the spaces where boundaries between expert and citizen knowledges emerge. These boundaries appear when families engage in practices of search that do not fit into the pre-established strategies of participation commonly provided by experts. The forensic practitioners, lawyers and academics that were interviewed for this study all expressed support for the families of disappeared persons, and recognised their status as victims. Some independent experts have publicly declared that much of their work is geared towards attending to and listening to the demands of the families of the disappeared. Forensic practitioners have described this approach to forensic identification and disappearance cases as ‘victim-centred’. However, in Mexico I observed that as soon as families were involved more actively in searches (e.g. by locating clandestine mass graves) forensic practitioners, and even some human rights activists, would condemn these practices as “desperate efforts that will play back against them, and against the

preservation of evidence”(cf. EPAF-EMAF Joint Statement, 2014). This erects boundaries between the data and forensic materialities that families are allowed to collect (citizen knowledge) and what they are not allowed to collect (expert knowledge). Understanding the roles and limitations of those who are allowed to collect information on disappeared persons, as well as considering the types of data they collect, can shed light on the politics of forensic knowledge production. In Mexico, the politics of knowledge production are greatly informed by traditional understandings of expertise, where families are not seen as reliable actors in the pursuit of objective knowledge, because their pain and grief entails that their emotions will cloud their judgment.

Citizens’ Engagements with Science: Performing the Boundaries of Forensics in Mexico

On the night of September 26, 2014, a group of students from the Ayotzinapa Teacher Training College entered the city of Iguala, Guerrero, in southwest Mexico, to commandeer a number of buses and make their way to Mexico City to participate in a commemorative event to mark the anniversary of the October 2, 1968 Tlatelolco Massacre.¹³⁶ The Ayotzinapa Teacher Training College supports students who wish to work in the elementary education system. The college ethos is tied to principles of social transformation, and important figures such as Lucio Cabañas and Genaro Vazquez Rojas were educated at Ayotzinapa and went on to lead important guerrilla movements in

¹³⁶ On October 2 1968, government forces opened fire on a student protest in Tlatelolco Plaza in Mexico City. Official sources reported dozens of dead, but first-hand accounts of the event and international media claimed that hundreds of students died or were disappeared on that day. Since then, an annual commemoration has taken place in Mexico City on every October 2, to remember the students’ struggles against the authoritarian government.

Mexico. As a result of these ties, the federal government has deemed the college to be a hotbed of guerrilla activity. The college has been continually demonised by both the federal government, and that of the state of Guerrero — a state known for its violence and narco-trafficking (Poniatowska, 2016, preface).

After the group had “borrowed” the buses and were making their way back to campus, municipal police officers and, allegedly, members of organised criminal groups ambushed the students. Three students and two bystanders were killed, and 43 students were disappeared (VICE News, 2015). A generalized sense of unrest spread through the country, mobilising an enraged civil society to publicly protest, create monuments, stage public performances, march, and demand action by the state. A few weeks later, under the scrutiny of the international media, federal authorities announced the recovery of human remains, believed to be those of the 43 disappeared students. However, after a forensic analysis was carried out by federal authorities, it was concluded that one of the bodies belonged to father John Senyondo, a Ugandan priest based in the Chilpancingo diocese of Guerrero who was abducted on the 30 April 2014 by unknown gunmen (Dearden 2014). The other thirteen bodies were unidentified. These findings fuelled local families’ fears. Since the 1970s, hundreds of persons had disappeared in the state of Guerrero during the ‘Dirty War’ in Mexico. This violence has only intensified since the “War on Drugs” began, and local families feared that their missing loved ones might be among the unidentified bodies.

By the time of this announcement, local civilians, particularly members of the Union of Peoples and Organizations of the State of Guerrero (UPOEG), led by Miguel Angel Jimenez Blanco (the UPOEG’s community leader and a political activist), had already begun looking for the disappeared students with relatively little local support either in

terms of safety or infrastructure. The local search groups had already identified a number of clandestine mass graves, dozens of bone fragments, torn clothing, and many other traces that showed the extent of ongoing massacres in the state of Guerrero.

It was only a matter of time before non-state actors, such as the local church of Gerardo Maria Mayela in Iguala, Guerrero and the UPOEG, would come together alongside civilians to collectively organise citizen-squads to spot clandestine mass graves in Guerrero's mountain range. As Moon has argued, much is at stake in the interpretation and deployment of human remains for the interested parties:

[H]uman remains occupy the intersection between and cross, constitute and negotiate a complex and expansive set of boundaries including those between family and nation, past and present, violence and justice, authoritarianism and democracy, memory and commemoration, denial and truth (Moon, 2013, p. 12).

Human bones have politics, and anyone who comes into contact with them performs a distinctive political act, for instance by revealing the precarious infrastructure that the state, the legal guardian of human remains, has established to face the tragedy in question. In this case, the citizen-led practice of locating clandestine mass graves is a practical and frontal challenge to the dereliction of duty that characterizes the Mexican state.

In Iguala, a union of members of the UPOEG, the local church, and hundreds of local families searching for a missing loved ones became known as The Other Disappeared. The group decided on this name as a means of highlighting that their searches for mass graves would not be conducted with the sole intention of finding the 43 students, but in order to find the hundreds of other disappeared persons, missing from Guerrero and elsewhere in the country. Shortly after his initial efforts to locate clandestine mass graves in Iguala, Miguel Angel Jimenez Blanco met with Dalia, the mother of a young man who disappeared in 2008 while on holiday in the northern part of Mexico. Dalia had been looking for her son since 2008, and earlier on that month (September 2014) she had

become a founding member of the ESRC Project ‘Citizen Led Forensics’, CLF.¹³⁷ Dalia lives in the state of Guerrero, and when she heard news of events in the nearby municipality of Iguala she contacted the CLF project to discuss whether it would be possible for her to offer help to local families by providing DNA kits. Dalia understood that an independent, citizen-led national DNA database was imperative for Mexico, particularly in the light of the recent discovery of further clandestine mass graves. The discovery of these graves opened the possibility that many of the disappeared were among the unnamed bodies. After consulting with the other members of the CLF project (at that time fifteen relatives of disappeared persons from all over the country), Dalia offered 500 DNA kits to enable the collection of family reference samples, an action that became the first milestone towards the creation of the citizen-led biobank.

The aim of the citizen-led DNA Database is to gather 1,500 DNA reference samples and Forensic Data from families who are searching for disappeared person in Mexico. Families collect their own DNA reference samples using cheek swabs and complete a form requiring details from the person giving the sample, as well as information about the disappeared person. These details include physical characteristics, height, weight, age, date and place of disappearance, among other forensic information that could be useful for identification purposes.¹³⁸ In this registry, there is also provision for families to describe the disappearance in their own words, recording their knowledge of the event, including perpetrators (if known) and possible lines of investigation. The DNA samples are then sent for analysis at the DNA laboratories of the Guatemalan Forensic Anthropology Foundation (FAFG), before being returned to the families. The sixteen members of the governing body that manages the database are all relatives of disappeared

¹³⁷ ESRC Project “Citizen-Led Forensics: DNA and Data basing as technologies of disruption, novel ways to learn and intervene in the search for the disappeared in Mexico” ES/M00063X/1.

¹³⁸ Reference samples are taken to establish relatedness, so, for example, families will collect at least three samples from both parents of the disappeared person, as well as one sample from a child or a sibling.

persons and, in this role, organise monthly or bimonthly public events for the collection of samples. Collecting these samples helps families in three ways: first, families are able to have an independent analysis of their DNA that could later be useful for identification purposes. As I have explored in this thesis, the reliability of the forensic work of the authorities has been consistently undermined by their constant failure to carry out investigations. Thus, access to independent DNA analysis is, for families, understood as offering a kind of auditing service. Second, DNA samples can also serve as a way of highlighting the problem of disappearances in Mexico. In addition, this process of cataloguing DNA is useful for posterity, ensuring the forensic investigations of any future generations can rely on comparative genetic material when trying to ascertain the identity of victims.



Figure 7. Families of the disappeared collect saliva from cheek swabs in order to be analysed. As part of CLF, families received training on how to collect these samples and recommendations on how to avoid contamination (see appendix for more information). Photo provided by CLF.

The task of collecting data on disappearances and DNA samples was titanic. A great number of the 450 families that meet each Sunday in the church at Iguala do not know how to read or write. So Dalia, with the help of Jonas and Miguel Angel, worked to collect data from the hundreds of families that arrived at the church asking for help. The project's mobile technology used a registry designed during the workshop we held in September 2014 (see chapter three) and was adapted in order to make it possible for the families to use it and to collect the necessary data for its operation. This allowed the families to collect forensic information related to disappearances in the region, and the CLF database became the first independent record of the violence experienced in Iguala. Each Sunday, the newly founded group The Other Disappeared would meet in their local church before setting out to search for bones and clandestine graves. These citizen searches raised urgent questions about the proper role of expertise by making visible social boundaries that are

actualized only when challenged: for example, the boundaries enforced by the modern state over the governance of dead bodies (Stepputat, 2014; Toom, 2015).

The search for clandestine mass graves was not only marked by solidarity and family efforts but also by division and distrust. With the eyes of hundreds of international journalists and human rights organizations upon the Mexican government amidst the crisis provoked by the disappearance of the 43 rural students, the emergence of the citizens' DNA database, and the continuing search for clandestine mass graves, the PGR's office immediately provided DNA samples to anyone that went to the church where the group met. Not surprisingly, state support came with certain conditions: clandestine mass grave spotters would have to conform to state protocols, and no support or DNA samples would be given to the CLF project due to the political and organised nature of the group (Schwartz-Marin, Fieldwork Notes, 22 March, 2015). Different state agencies began offering financial support to the families — many of whom struggled to pay for the commute to Iguala — and for a few months the government organised festive activities as well as group sessions to deal with posttraumatic stress in the area. As time went by, the group of citizens began doing searches in collaboration with forensic anthropologists appointed by the state (experts assigned by the PGR) rather than with members of UPOEG.

Citizen searches carried out in the state of Guerrero were publicly condemned by Mexican human rights defenders and forensic anthropologists. During an interview, Franco Mora, an independent forensic anthropologist and member of the Peruvian Team of Forensic Anthropologists (EPAF) declared: "If it [digging mass graves] was so easy, everybody would be taking their shovels and would start digging holes all around Mexico, destroying every trace of context" (Tomasena, 2014, unpaginated). In sum, on the grounds that they, as established forensic specialists, were the experts and that anyone else's intervention would "contaminate" due process — whether due to lack of expertise or emotional instability — the participation of other citizens, especially the relatives of the disappeared, was framed as counter-productive.

In any case, relatives who were "digging holes" were much more aware of context and local politics than Mora and other observers would like to concede. For example, a local

resident who is familiar with the landscape and is participating in a search squad might be readily able to identify a clandestine burial by looking at the differences between soil disturbances and drawing a distinction, for instance, between soft soil as a consequence of anthills or a potential mass grave. Families from these municipalities have been living in the area for generations and, so, are keenly aware of different types of vegetation and changes in soil.

The opposition that relatives in Mexico face, not only from the state but also from human rights defenders and international organisations, is well summarised in Emilio Alvarez de Icaza's public declaration on civilian forensic practices. Alvarez Icaza was, then, executive secretary of the IACHR and former leader of the MPJD, and he condemned citizens' forensic practices as desperate efforts that would destroy important evidence and that could ultimately become dangerous for the families involved:

I completely support the idea of a proactive role for citizens and victims. It has been shown that when civil actors engage [politically], at least what you get is a different attitude from the authorities. Citizens have to engage, support, revise, demand [...] but I don't share this idea, first because it is the state's responsibility and because it is not advisable for people to go out and search for mass graves all by themselves, since this [activity] can also have tricky effects on evidence. You need expertise, knowledge; you need to know what you are doing because otherwise desperation is going to play against victims...because evidence will be damaged (Alvarez, 2015).

At the time of this statement, Alvarez Icaza had not met with the relatives who had been searching for mass graves in Iguala, nor had he engaged with their practices, or assessed how they handled human remains. Local teams of independent forensic anthropologists had been afraid of visiting, and potentially advising, relatives in the area not only because organised crime still operates in Iguala (murders in the city are a common occurrence), but also because their reputations as experts could be damaged through their involvement in these cases. These factors made it more stressful and difficult for Miguel, Dalia, and Jonas to continue their searches for clandestine mass graves but, despite these obstacles, their efforts continued.

According to the Mexican historian and political analyst Lorenzo Meyer, it was after the publication of images taken by national and international media that showed citizens using shovels and picks to locate mass graves that the IACHR decided to send a special team of forensic experts to the area to assess the disappearances and human rights violations that had occurred in the area:

[W]hat would have happened if the relatives hadn't insisted on looking in graves, showing all the corpses dumped there without anyone knowing who they were? If relatives had waited until now, until this moment when the experts from the IACHR are finally coming, after months of what happened in Ayotzinapa, do you think those experts would have arrived? Was it not because the relatives started looking by themselves, for themselves and with their own particular reasons, that the necessary momentum was generated for the IACHR experts to *finally* visit Mexico? (Meyer in Aristegui Noticias, 19 January 2015, his emphasis.)

According to Meyer, it was thanks to the forensic efforts of local communities that the necessary momentum was gathered to push the IACHR to visit Mexico. The search practices that citizens developed in Ayotzinapa constitute forensic practices in the sense that families were opening up forums for their disappeared to be discussed in public life (*forensics* as forums) and, at the same time, were making steps towards the use of forensics for the purpose of the law. On 2 October 2015, roughly one year after the disappearance of the 43 students (on 28 September 2014), members of the IACHR visited Mexico in order to observe the country's human rights situation on the ground, with particular emphasis on forced disappearances, extrajudicial executions, torture, citizen insecurity, access to justice and impunity, and the situation of journalists and human rights defenders among other groups that have been affected by the context of violence in the country (IACHR, 2015).

During the onsite visit to Iguala, Alvarez Icaza visited the small church of San Gerardo Maria Mayela, the headquarters of the citizen-led exhumation movement. He and his colleagues not only met with members of The Other Disappeared, but were also taken to the sites where the group had found clandestine mass graves. Through these visits,

Alvarez Icaza and his colleagues bore witness to the bone fragments, torn clothing, and shoes that had been found along with more than 150 clandestine grave sites since their forensic endeavours started in early October 2014.

As part of the meeting held in San Gerardo Maria Mayela, members of The Other Disappeared explained their strategies for locating clandestine mass graves and gave their account of their successes in locating these spaces. The group also urged the IACHR to provide them with provision for their personal safety, since their forensic activities put their lives in danger — Miguel Angel Jimenez Blanco was murdered on August 9, 2015, while driving his taxi. Finally, the group demanded that authorities recognize their expertise as “mass grave locators/hunters” via an official document, provide them with new technologies, such as a ground-penetrating radar to detect soil disturbances, and assist families who are part of The Other Disappeared in their efforts to get an official disappeared persons report, among other petitions (Cuevas, 2015).

Alvarez Icaza’s visit to Iguala blurred the boundaries between expert and citizen forensic knowledge that he had so firmly asserted in his statement from the preceding year. In October 2015, the IACHR published their preliminary observations from this official visit (IACHR, 2015). Within its 26 pages, the document acknowledged the efforts of The Other Disappeared in locating the corpses of some of those who had disappeared in Guerrero and who would have, otherwise, been forgotten. While the unearthing of the corpses found in the dozens of clandestine mass graves in Guerrero might not bring the disappeared back to life, the forensic work of local families and engaged citizens certainly makes it possible for the dead, who had hitherto been unrecognized by the state and are still nameless, to reoccupy a place in public life.

On top of the mobilization of their highly contextual knowledge in their spotting of mass graves, many relatives were keenly aware of the fact that their public determination to find mass graves, despite the inherent danger of this practice, and their own lack of credentials, was sending a clear message to Mexican society at large, and to both governmental and nongovernmental forensic practitioners who had neglected their cases

for years, or had focused solely on the search for the 43 students of Ayotzinapa (Schwartz-Marin, Field Notes, 22 March, 2015). This is clearly exemplified by the declaration of a member of The Other Disappeared, recalling one of his first encounters with a forensic anthropologist who was working with the PGR's Office analysing mass graves in Iguala — but not those related to the 43 missing students:

I took the shovel to start digging the soil, I remember the soil was very loose so it was easier for me to dig...and I found trousers, I found clothes...and then I shouted to the anthropologist who was working on a nearby pit “anthropologist, anthropologist! I found something, can you come here?” and she got out of the pit where she was working and arrived to where I was. “Look, I found something” I said, and when she saw the trousers I found, she got really, really mad, and started shouting at me “What have you done?! Why are you doing this, you know you are not allowed to do this! Who allowed you to do this?!...I’m not going to work on this pit!”...At that moment I was a novice, doing the excavation and I messed up, I felt very bad, I was very nervous. And she continued saying: “You know you can’t dig, you are not allowed to do it, and if you are going to do it you have to call me! You simply cannot do this! (SomosElMedioTV, 2015.)

Throughout the interview, he explained how the scolding that he had received from state experts and authorities was exactly what pushed him, and many other relatives, to continue their searches for clandestine mass graves. Thus, by publicly breaking the “modern constitution” (Latour, 2003), which dictates that science (objectivity) and politics (passion) should be separated, these pioneering relatives of the disappeared were able to reverse the power relations between experts and mourners. After all, they were the ones with the knowledge to locate, spot, and even partially dig up mass graves.

In response to the limits imposed by the legal system and by experts surrounding the handling of human remains — and also moved by pervasive distrust of state agents — citizen-led searchers have developed a technique to uncover human remains and then mark the locations with flags. Afterwards, these groups organise shifts to supervise the spot until a forensic authority arrives. The subsequent handling of these newly discovered clandestine mass graves is then supervised by a group of relatives, ensuring that the remains are treated in a caring and dignified way: “We take special care when handling

human remains; we know our son or daughter could be there in the mass graves” (Schwartz-Marin, Field Notes, 2014). Such practices constitute a direct attempt to combat government neglect through community-based forensic practices. Through their situated practices of forensics, and their ethos of care for the human remains they encounter, these citizens are actively re-making what constitutes legitimate science and authorised forensics. In a sense, they are stating a claim, and authorising themselves to uncover important truths.

Citizens’ practices of clandestine mass grave location, that initially gained momentum in the state of Guerrero, have now travelled to new spaces. More recently, families’ searches for graves have become much more organised activities, and groups of spotters have created more *forums* in nearby states, such as Morelos and Veracruz. This shift has also allowed for other groups around the country to make their search activities public, highlighting practices they have been engaged in years before the disappearances in Ayotzinapa gained international attention. Such searches for bodies and clandestine mass graves have been carried out by the families of disappeared persons since the early 2000s in Coahuila, Chihuahua, Nuevo Leon, and other regions of Mexico (see my chapter ‘On Mexico’).

The Other Disappeared are building a movement that promises to further erode the boundaries between experts and mourners in the future: this is creating a community of practice. According to the philosopher of science Lorraine Daston (2009), science is first and foremost a community of practice, held together by practice itself. Thus, this community is comprised of people united not just by their affiliation to a group (nation, state, region, tribe, or even pain) but by their desire to challenge the absence of the rule of law in Mexico, and to do so through the appropriation of the scientific means to search for the truth, means that, until very recently, were monopolized by the government and its experts.

From 27,000 to 43, or Why Ayotzinapa Matters

In an attempt to conclude the case, in January 2015 the then Attorney General of the Nation, Jesus Murillo Karam, gave a press conference on the case of the 43 missing students. The Attorney General informed the public that the 43 students from Ayotzinapa were kidnapped, killed and later burnt in a local dumpster and the charred remains thrown away to the nearby river: “That is the historic truth of what happened.”¹³⁹ These conclusions were based on the case investigations, which included the analysis of a bone fragment found in a river close to where the students disappeared, as well as the confessions of some of the perpetrators. However, the families of the 43 students remained unconvinced by the state’s “historic truth”. Some of the parents reported that they had been calling their children’s mobile phones, which appeared to be receiving calls, although they were not picked up. The families refused to believe that no more traces or evidence could be found after the burning of 43 corpses. Additionally, the local community was also aware of the amount of clandestine burials that The Other Disappeared had found and wanted to know if the 43 students could be among the victims found at these sites.

In March 2015, the IACHR sent an Interdisciplinary Group of Independent Experts (*Grupo Interdisciplinario de Expertos y Expertas Independientes: GIEI*) to Mexico to implement an auditing process of the state’s provision of justice and its investigation of the Ayotzinapa case. In April 2016, the GIEI issued a report concluding that the investigations carried out in Ayotzinapa by the PGR’s Office were misleading (GIEI, 2016). The GIEI identified fundamental failings in the state’s criminal investigation.

¹³⁹ In Spanish, “*En ese orden. Esta es la verdad histórica de los hechos*” (Cruz-Santiago, Fieldnotes, PGR Press Conference, Murillo Karam, 27th January, 2017).

These failings included the mishandling of evidence, involving the treatment of clothes found at the scene, a lack of a chain of custody, the destruction of a videotape from a camera that may have captured the main incident, and a failure to consider alternative motives (GIEI, 2016). The GIEI concluded that both the state and federal police, as well as army units, were not only in the area at the time of the attack and aware of what was taking place, but had also failed to intervene. These events have further damaged citizens' trust in forensic institutions and the justice system, and have propelled the families of disappeared persons to continue their searches for their loved ones in more public ways. The Ayotzinapa case matters for forensic science because it shows that state experts and forensic institutions are refusing to comply with the protocols developed through years of international technical assistance from independent experts deployed to Mexico. Furthermore, Ayotzinapa highlights the fact that one-off independent consultancies (such as those offered by the EAAF and the GIEI) cannot provide the sustained support needed to produce reliable forensic work. Human rights forensics needs to question its efficiency in spaces where violence is ongoing and a clear strategy toward accountability has not been achieved. This is particularly imperative in spaces where the families of the victims are still searching for their loved ones, learning forensic techniques and intervening in the ways in which forensics is understood and practiced.

The disappearance of the 43 Ayotzinapa students also reveals the difficulties of effectively policing the boundaries between experts and mourners. In this case, isolating "pure corpses" (that is, bodies constructed as fragile and in need of special treatment—as if the "truth" they speak is to be recovered by forensic experts) from the "dangerous citizens" unearthing them. While citizen-led searches might tamper with evidence and "context" in ways that many experts find unacceptable, it was thanks to the work that Miguel, Dalia and Jonas spearheaded in Iguala (and that many other anonymous heroes have performed all around Mexico), putting their lives in danger in the process, that we

know a bit more about the true extent of deaths and disappearances in the country. Through their disruptive actions we can now grasp some of the intimate, but also numerical and political, dimensions of the human tragedy unfolding in Mexico.

Performing borders in Forensic Science: AM/PM They cannot do it

As explained in my chapter 'On Methodology', an important instrument used by the Mexican authorities for the collection of Ante-Mortem data is the Ante-Mortem/Post-Mortem (AM/PM) database, donated by the ICRC to the Mexican government in 2013. The AM/PM database is an electronic tool that gathers information on missing persons, unidentified bodies and body parts in six modules. In order to collect information for the AM database, the PGR's Office and the ICRC trained staff in interviewing techniques for the correct completion of the AM questionnaire. This is particularly relevant since the information for this tool is provided by the family members of the disappeared person. Nonetheless, during my fieldwork in Mexico, families reported that staff at the PGR were giving the AM questionnaire to families to complete by themselves. The families had to fill in one AM questionnaire for each family member who is to be reported as disappeared. For some families, this meant filling in approximately 240 pages of information. Thus, in one of the meetings that the families' participating in the CLF project had with the ICRC, we asked them to provide training directly to the families; after all, they were the ones carrying out searches and filling in these AM forms.

Field Notes, 19 February, 2015: The room was full of relatives of the disappeared. They were all experienced in finding evidence and tracking inconsistencies when engaging with forensic specialists and government officials. The only demand we had of the ICRC delegation in Mexico was for families to receive training on how to use their technology (the AM/PM database), but the answer was still "no".

The staff from the ICRC consistently presented themselves as a neutral agent in the governments' 'War against Drugs'. Neutrality meant intervening by building the state's forensic capacities, and training state officials to implement the AM/PM database. However, it was the relatives of the disappeared who were filling out the AM/PM (see my chapter 'On Methodology'). Despite the fact that they had not been able to properly implement the AM/PM, nor train the many government officials who might not even have access to a computer, the ICRC remained adamant. Jorge, a Co-Founder of the GFC, somehow estranged from the organisation, asked:

"I imagine that you conducted a feasibility study before implementing the technology in Mexico right? Or at least a scoping study to know that people had no infrastructure, or time to make your tools work, right?"

The faces and awkward smiles of the director of forensic science and the head of the ICRC were telling: they looked at each other, and said that this was not their responsibility. Their role was to donate the technology, and to train staff in interviewing techniques, but, ultimately, training other staff and distributing the AM/PM all over the country was the remit of government officials. Regardless of the many examples shared by the mothers and fathers of disappeared persons in the same room, the ICRC still rejected the idea that the relatives of the disappeared should receive the same training as experts. This rejection began with a remark that only people with a University degree could properly apply the technology. However, once many of the mothers in the meeting raised their hands pointing out that they had received a University education, and so they could do it, then the questions of neutrality and conforming to the legal standards of the country, became the key objections.

After a heated exchange about the real neutrality of the AM/PM and the role of the ICRC's experts in helping only state agents – in a conflict where state forces are involved in criminal activity – the ICRC delegation left the room, saying that they would consider the request. They also pointed out that they have a branch of psychological and medical aid, if needed, as well as a branch to help families fight for improved legal frameworks to strengthen human rights and forensic science. However, the families' potential role as forensic experts was denied throughout the meeting.

The Amphitheatre in Mexico City: Dead bodies, Touching, Smelling as Proof of Expertise

What? You have never seen a cadaver?...Come closer,
it is important that you look closely at the physical
characteristics of this person...

Have you seen the bullet hole in the forehead? Can you
guess the trajectory of the bullet? Come here, put your
finger inside the bullet hole...touch...

(Field notes, lessons on how to identify an unknown
cadaver, March 2015.)

My time in Mexico City's Amphitheatre was crucial to understanding that expertise is not restricted to knowing the protocols for carrying out autopsies, applying best practices to the exhumation of mass graves, or the processing of crime scenes, but requires from those who work in the field of forensics a necessary familiarity with dead bodies. This experience incorporates touching, smelling and exploring flesh wounds. In sum, a sensorial engagement with corpses was needed to be recognised as a forensic expert (Field Notes, March, 2015).

The teachers at INCIFO showed me that it was necessarily to be acutely familiar with cadavers in order to analyse them. It was precisely the familiarity that many of the relatives of the disappeared had with cadavers and human remains that troubled many of my forensic interlocutors, who believed that these types of encounters should be restricted to experts, since they are trained to handle this kind of evidence. For some forensic specialists in Mexico, there are still spaces where citizens and science should not coexist. During one of my fieldwork visits to a Mexico City mortuary, I was introduced to a government forensic expert. I was wearing a white lab coat, which was one of the requirements for my visits to the mortuary. However, my lab coat was not standard issue. As part of the CLF project, we designed a lab coat to be worn by families during the collection of DNA Samples, bearing an emblem that reads: "*Ciencia Forense Ciudadana*" ("Citizen Forensic Science").



Figure 8. Lab coat I was wearing during my visit at INCIFO.

We discussed my research and I explained my interest in the ways in which citizens are carrying out searches for their loved ones, with some groups very effectively locating clandestine mass graves. At this the forensic expert replied: “Oh, I know who you are. You are one of those who are in Iguala digging mass graves.” After questioning why I was wearing a lab coat without any training in forensics, the forensic practitioner, raising their voice, continued:

Don’t you see? Citizens cannot be involved in forensic science practices, they are there [moving his hands as drawing an invisible line] and we experts are here [pointing to where he was] . . . the word ‘citizen’ and ‘forensic science’ cannot be together in the same sentence; that is nonsense (Field Notes May, 2015).

The response of this expert is a vivid example of the position shared by many practitioners, and is indicative of their need to erect boundaries that divide their expert knowledge from grass-root activities, such as the mass grave spotting and disinternments performed by the relatives of the disappeared.

Demarcation efforts were also enacted in the early stages of my fieldwork: for example, when I met forensic experts at the National Autonomous University of Mexico (UNAM) in my capacity as Co-Investigator, with Ernesto Schwartz, Principal Investigator of the ESRC funded CLF project. The two academics in the meeting assumed that we were joking when we told them that we planned, alongside the relatives of the disappeared, to co-create and co-govern a DNA and forensic database. One of the researchers from UNAM asserted:

You could probably do it, after all you have PhDs, though you don't have the legal credentials to start such a process, but the relatives mmhh... I think they are not ready to do any of that, nor do they have the skills. Maybe they could constitute a supervisory board of due process in forensic science, but nothing else... (Field notes September 2014).

Visibly upset, I asked if the only solution to effectively deal with the sheer amount of deaths and disappearances in Mexico would be to wait until their first cohort of students finished their five year university education. The course's general director immediately answered that Mexico has no other choice than to wait at least five years for their first cohort of students to graduate from school before they can start working in Mexico, using proper knowledge and tools (Field Notes, September 2014).

Mexican authorities have consistently declared that citizens' engagements with forensic knowledge (e.g. clandestine mass grave location and handling human remains) could damage evidential objects found at those scenes. This could, in turn, prevent the use of such objects as evidence in courtroom proceedings. This view contrasts with Doretti and

Burell's (2007) discussion of their work as forensic anthropologists at the EAAF. Doretti and Burell (2007, p. 53) record that they found non-conflicting ways to respect the decisions of the victims' families in "extreme case[s]" where the family totally opposed an exhumation. Doretti and Burell explain that these issues can be navigated sensitively by considering the uses and customs of communities: for example, in Muslim countries, or with victims who are Seventh-Day Adventists, and so prefer not to disturb the spaces where their loved ones are buried. In some of these cases, the EAAF left "mass graves untouched due to the wishes of family members" (Doretti and Burell, 2007, p. 53). From a legal standpoint, Doretti and Burell contend that this approach can be taken without compromising an investigation because:

[F]irst, most tribunals and commissions order forensic work for a very limited number of select cases, and second, to prove legally that a massacre occurs, not all bodies need to be discovered and examined. From historical and documentation standpoints, we can still provide an estimate of the total number of victims by other means (2007, pp. 53-54).

This principle of accommodating cultural preferences into forensic work without compromising the criminal investigation has also been analysed by Rosenblatt (2015), who explains that during the investigations of violence in Timor-Leste, forensic experts witnessed how family members identified whether a body was that of their missing relative by cutting themselves and dripping their blood over the bones. According to local beliefs, only the blood of family members would be absorbed into the dry bones (Rosenblatt, 2015, p. 23). Similarly, in Guatemala, as the identification process of victims from human rights abuses was being carried out, the forensic team working on the case laid out the personal belongings (clothes and jewellery) of some of the individual bodies in the hope that a presumptive identification could be achieved. However, if time passed by, and a body could not be matched through identifying objects, relatives would often

come forward and say, “If it has no owner, then it is mine.” This was a way of refusing for any person to go unmourned. According to Rosenblatt:

These survivors turned an attempt at forensic identification into an affirmation of communal ties and an act of care for the dead — in part by abandoning the standards that would have made the process scientific. Though forensic teams have responded differently to these types of situations, in no instance have they completely renounced their own professional commitment to scientific method. Rather, a negotiation between the two priorities that intersect and diverge at different points — scientific practice and attention to the needs of mourners— becomes part of the “public square” in which these experts operate (Rosenblatt, 2015, p. 23).

These accounts provide different examples of citizen approaches to forensic identification processes. According to the explanations presented by Doretta and Burrell and Rosenblatt, it is crucial that forensic experts seek ways to understand and negotiate spaces for traditions and cultural norms, particularly in relation to local practices of mourning for individuals and communities, within the frameworks of their “objective” work as scientists. However, when faced with different ways of mourning — as in Mexico, where families are actively searching and taking part in the production of forensic knowledge — forensic experts and human rights defenders publicly deny, and condemn such practices. What is different between these two practices and why do these differences matter?

Citizens’ practice of forensic knowledge taking place in Mexico call for a different understanding of forensics. This requires a forensic science that does not shy away from “madness” and emotions, but rather works with and through subjective experiences of violence and takes into account the knowledge generated from processes of continuous search and the lived experiences of a disappearance. Families in Mexico have gained forensic expertise in non-traditional ways, by experiencing the pain and uncertainty of the disappearance of a loved one. And it is precisely the notion that their expertise comes

from non-traditional training that allows them to reflect on their own knowledge and its acquisition. Unlike “formal” forensic practitioners, it is precisely families’ uncertainty of the future that strengthens their practices.

As Graciela, one of the mothers who manages the Citizen-led DNA database explained to me:

I’ve known families who have been looking for their loved ones for over forty years...we need to collect the DNA from the parents of those who have disappeared; we have to do it now, otherwise time is going to play against us...we are still alive and we need to collect this data to match our DNA with the DNA of those bodies that are buried all over the country, the country is now a big mass grave... (Personal Communication, January 2017).

One way of understanding the different practices of citizen-led forensics emerging in Mexico is through the concept of “articulate collectives” (M’Charek, 2008). Understood as comprising “articulate collectives”, citizen practices of forensics cannot be assessed or condemned *a priori* as unscientific and/or dangerous. Rather, as “articulate collectives”, citizens’ forensic technologies can be understood in practice, and through observing these practices, a particular ethos of situated forensic knowledge can be seen to emerge.

Arguing for Lay Expertise in Mexico: Towards a Feminist Forensic Science

Families’ engagements with search are often demeaned or dismissed according to the criterion of “what counts” as scientific evidence — as understood by the police and forensic experts (Parr and Stevenson, 2014; Parr, Stevenson and Woolnough, 2014). For instance, Rosenblatt (2015) extends the term “forensic experts” to include people involved in the many other forms of labour necessary for exhumation and identification

processes at gravesites. These figures, while not necessarily identified as “core” forensic experts (i.e. Anthropologists, archaeologists, pathologists, etc.) include case managers (people who provide moral support for the families of disappeared persons during the identification process), clothing launderers, cooks, backhoe operators and security guards, all of whom are required to make a forensic investigation possible and can become part of the complex politics at and around the gravesite (Rosenblatt, 2015, p. 6). However, no space was given by forensic practitioners to consider families of the victims, and the knowledge they can provide to the investigations, as “forensic experts”; for families, there is no forum in which they can be considered bearers of knowledge. However, as I’ve shown, many families in Mexico possess detailed local knowledge of the area (e.g. of local vegetation and soil disturbances), are well apprised of how organised crime networks operate within their local area, and are even familiar with the ante-mortem questionnaires developed by international organisations.

Even though the practice of forensics has undergone a profound shift, from its traditional role in its service to the law and inside court rooms to a more human rights based approach, where the stability and legitimacy of transitional governments is dependent upon the practice of forensics, there has not yet been a place for the knowledge produced by the relatives of the disappeared in Mexico in the assemblage that is forensic knowledge production.

According to Rosenblatt (2015, p. 16), the rapid development of new forms of forensics will continue to evolve in tandem with technological changes. This evolution will eventually create a new feminist forensics that will take on the challenge of investigating violations of social and economic rights: for instance, detailed accounts of a child’s real height versus accurate projections of what it would have been if s/he had been better fed, or documenting how someone could have caught a disease that almost certainly could have been prevented. A feminist forensics that would be capable of taking on the problem

of mapping, quantifying, and explaining the policies and practices responsible for millions of the world's "missing women".

This thesis stakes out new ground in its suggestion of a feminist forensics. I contend that by looking at Mexico's disappeared persons, and the search strategies deployed by the families who are looking for them, my research renders a feminist forensics that delves into the embodied practices of a grassroots knowledge production permeated by loss, care and love.

Concluding Remarks

In this chapter, I explored how boundaries between expert and lay knowledge are enacted in forensic practice in Mexico. I have done so by, first, examining the different search assemblages that are deployed in missing persons cases, and how in the case of Argentina, search assemblages seem to incorporate the knowledge collected by the Grandmothers of the Plaza de Mayo on "suspicious children" and of parental testing via blood sampling. However, as Smith (2016, p. 15) argues, these "layperson advocacy" efforts, and the networks they have built around human rights forensic identifications, are being dismantled by the marginalisation of human-rights DNA identification. This is occurring both materially and ideologically as global security has become the leading rationale for DNA identification.

Second, I analysed three different instances where the limits of the forensic materiality that citizens are able to interact with are clearly marked: In Ayotzinapa, the nearness of families to bones and decomposed bodies marked a boundary between expert and lay knowledge. The same structure is visible in the case of the families engaged in collecting DNA samples for a citizen-led DNA database; the members of the ICRC made it clear

that the families were and should not be trained to complete an AM/PM form. Furthermore, I was firmly told that I do not hold the credentials to legitimise my wearing a white lab coat, since “citizen” and “forensic science” do not belong “in the same sentence. When families’ engagements with different forensic materialities defy the permitted ways that non-formal experts or lay persons tend to engage with science, arguments surrounding authority begin to erect boundaries to keep lay persons at bay.

Thus, I have made an argument toward a practice of a feminist forensics. This practice allows for the visibility of the knowledge of the subjugated, and gives voice to the family members that are creating ways of understanding what happened to their loved ones, and brings new evidence to add weight to their claims for redress and dignity. Through their practice of search, including spotting, mapping and landscape analysis, families have created forums in new and unexpected spaces: for instance, in the hundreds of clandestine mass graves that are being discovered throughout the country thanks to their continuous work, and arduous investigative labours. In short, I argue for a feminist forensics that engages with the politics of knowledge production, in *practice*, and defies the “right order of things”.

Chapter Eight: Conclusions

Mexican authorities have consistently been dismissive of the issue of disappearances in the country, and have exhibited a systemic carelessness in the attempts that have been made to collect data on these cases. This thesis examines the ways in which these actions have transformed the relationship that the families of the disappeared craft with forensic data. As I have explored, there is a politics that asserts that legitimate or objective knowledge can only be provided by experts or police officers, a politics that seeks to distance itself from “the madness” and frailty of witness testimony, that seems to mirror the violence of the perpetrator (Weizman, 2016, p. 10). The search strategies deployed by family members in order to locate their loved ones are commonly framed by authorities and international organisations as emotional responses to “do something” in the face of trauma and tragedy. Throughout this thesis I have argued that we should consider these searches as contributions to forensic science in their own right. Furthermore, by taking citizen-led forensic practices seriously, I have rendered visible the boundaries between the individuals who are allowed to speak in the forum and those who are not. According to forensic practitioners, there is space for formal forensic authorities to incorporate local culture and religious practices into their forensic investigations (Rosenblatt, 2015), but there is no such space for situated people and their knowledges to be incorporated into scientific practices.

In order to create forums that allow for citizens’ practices of forensic science to be acknowledged and discussed, a feminist forensics that participates in subjugated knowledge making practices is necessary. A feminist forensics pays attention to the embodied dances of agency in which object and representation irrevocably collapse: literally, the disappeared are the maps that point to their last or potential location, and the

images that describe their story. These dialectic dances between humans and non-humans transform private citizens into lawyers, human rights defenders, and activists, while, at the same time, objects become “unruly” evidence and take on new meaning as the traces of a loved one, after they have disappeared. Therefore, in these cases there is a continual transgression of the boundaries between state-centric forensic expertise, understood as the single legitimate forensic force capable of sanctioning what is evidence and “proper science”, and the expertise generated by citizen-led forensics practices.

As I have shown through my discussion of Alejandro Moreno and Paloma Escobar, the cases of the disappeared are fluid and situated. These cases are fluid in the sense that the context of uncertainty and violence from which these types of absences emerge cannot be sustained by the fixed categories that national and international institutions assign to them. These fluid absences can be explained as consequence of an accident, a kidnapping, an enforced disappearance or even a deliberate decision to absent oneself. These absences are “*more than one and less than many*” (Law, 1999, p. 11, emphasis in original). It is precisely this fluidity and capacity for multiplicity that allows for disappearances to be actionable. Contrary to what happens in the unpolitical, and individual experiences of missing journeys explored in Hester’s Parr research, the passivity of being “missing” becomes active for the “disappeared”. This active stance towards disappearances entails strategies of search that challenge, change and sometimes subvert the unexamined/unacknowledged politics of forensic expertise. The active and constant reconstitution of “the disappeared” opens up the possibility for spaces like the mortuary, the court-room or government institutions to become as political as Alejandro’s mother’s sitting room, or Norma’s search accounts.

The human geographer Hester Parr’s research has been crucial to this thesis. Her research brings forth a new line of enquiry in human geography that engages with returned missing person experiences by considering not only “missing journeys”, with which absent

persons engage, but that also incorporates the experiences of families and the police. It is, thus, necessary to critically analyse the “different modalities of searching and their politics” (Parr and Fyfe, 2012, p. 629). In this sense, taking Edkins arguments forward, Parr and Fyfe (2012) argue for the development of a critical-social geographical research agenda that:

moves away from just and only knowing missing people through categorical and operational knowledges (the spatial behaviour profiles, incidence maps, risk assessments and “drivers for absence” data) [and instead advocates] for a taking seriously of missing experience, missing voices, missing mobilities, absence-making and ambiguous loss. (Parr and Fyfe, 2012, p. 634).

My research does exactly that. It advances a critical-social geographical research agenda that delves into citizen practices of forensic science in spaces where state-centric approaches to science and “objectivity” do not hold together. This is necessary because first, as STS and feminist approaches to science have shown, science emerges from practice, and embodied “dances of agency”, and, second, because it is precisely the state and/or state security forces that are committing these crime, either by acquiescence or by actively “disappearing” individuals.

Far too often, studies on security and forensic science have thought of the state as predominantly surveilling citizens’ data, and, thus, concerns surrounding the limits of the state in terms of the collection and analysis of this data have been raised. However, I have shown through this research that, in the case of Mexico, the government is wilfully taking no care of either the bodies or the data of disappearances. As the Mexican historian Lorenzo Meyer argues, “why is everybody worrying about families contaminating crime scenes or damaging evidence if the actors more interested in damaging and ‘losing’ the evidence is the state itself?” Through care, families authorise their expertise/legitimacy.

Citizens' practices of search constitute a direct attempt to combat government neglect through community-based forensic practices.

In this thesis, Chapter Two delineates the theoretical stands that run throughout this thesis. It elaborates on the history of STS by examining STS approaches to forensic science. As feminist and STS scholars have long argued, scientific knowledge is always socially constructed and is, therefore, political (Cole, 2003; Lynch et al., 2008; Lynch and Jasanoff, 1998; M'charek 2000, 2013; Latour, 1983). Thus, the "politics" that forensic experts seek to distance themselves from is already embedded in their scientific practices. According to conventional scientific arguments, truth and certainty can only be obtained through the lenses of an "objective" technology that establishes a clear distinction between "knowledge" and "body/emotions". In the case of human rights investigations, such as those explored in this second chapter, forensic anthropology and DNA analysis are understood as the technologies that scientists use to listen to what the dead softly speak. This is, however, not to say that forensic science offers a space where power relations, knowledge and positionality do not exist, but, rather, that the practitioners of the discipline unwittingly make powerful statements on social and political life (as has been shown by Prainsack and Kitzberger, 2009; M'charek, 2008, 2013; Moon, 2012). Furthermore, Chapter two advances its analysis of forensic science with reference to the etymology of the word *forensics*: as pertaining to the forum. By emphasising the importance of the term's roots in the "forum", this chapter lays down a theoretical approach that can be used to analyse the forums that emerge when citizens take on the practices of collecting and analysing data, and, thus, spaces for claims and counter claims on the disappeared begin to emerge. For the thousands of the disappeared in Mexico, the practice of forensics has become a site for the contestation of claims: a forum in which the disappeared are rendered visible in public life. In order to consider the potential of forensics to open up a political practice of possibilities, I discuss the open-ended nature

of disappearances in Mexico to argue for the development of a feminist forensics practice. Feminist forensics practices reflect on the production of situated and embodied knowledge geared towards locating and identifying victims of disappearance. Feminist Forensics consider citizens' searches not as a passive contributions to "lay knowledge" or as "character witnesses" used in predefined and bounded technical processes, but, rather, addresses citizens as active contributors of forensic knowledge.

The shift in who is allowed to speak in the forum, and who owns the right to speak on behalf of forensic technologies, not only shows how technologies are never objective and always political, but also raises feminist questions regarding the production of scientific knowledge, which has tended to be thought of as male driven, and separated off from feelings and emotions. Through their collection of and engagement with forensic data, the families of disappeared persons in Mexico have created alternative modes of knowledge production in which emotions matter: "We take special care when handling human remains; we know our son or daughter could be there in the mass graves" (Schwartz-Marin, Field Notes, 2014). A practice that legitimises itself through care, emotional attachment and action while at the same time producing forensic evidence constitutes a frontal challenge to dominant narratives of "objectivity", detachment, reliability and control. The research methods that inform my research are built upon these politics of care and further discussed in Chapter Three.

Chapter Four provides a situated account of the development of forensic science in Mexico, using the disappearances and killings of girls and young women in Ciudad Juarez, Chihuahua as an "entry point" to a broader account. Throughout this chapter, the experiences of disappearances in Mexico, from the case of Rosendo Radilla in 1970 until now, are woven together in order to understand the status of the provision of forensic science within the country. To this end, I analysed the technical assistance of international teams deployed to develop forensic expertise in Mexico, with a particular focus on the

work of the EAAF. Furthermore, this chapter emphasised the responses of citizens to the government's "epistemological ignorance" (Wright, 2016) regarding cases of violence and disappearance in the country, e.g. "The List" of names that mothers in Chihuahua gathered, the bone fragment that Laura's mother kept for future DNA analysis, and the different searches that these families have carried out in order to locate their loved ones.

Through a detailed analysis of Alejandro Moreno Baca's story, in Chapter Five, I showed one of the manifold ways in which absences are experienced in Mexico. Disappearance cases in Mexico tend to be particularly complex given that people are not only disappeared from their own cities or regular places of residence, but also while in transit, thus complicating any search strategy that might be deployed. Tracing the journeys of absence is always a "spatial and performative act" (Meyer, 2012, p. 107), and, in following traces and moving through uncertain and insecure spaces, Alejandro's parents have gained as well as produced knowledge. This production and gaining of knowledge is not only crucial in terms of determining Alejandro's own fate, but also reveals a complex state context in which organised crime and the government collaborate. I have also shown that through their practices of search, families are constantly changing the ways in which the absence of a loved one can be evoked or understood. Families in Mexico fine-tune their search strategies and the ways in which they understand absence on every occasion that they come into contact with the forensic materialities they have traced (e.g. maps, criminal networks, drone mapping, archiving, etc). Furthermore, this process re-shapes these materialities as they literally become the embodiment of Alejandro through their narrating and mobilising of the story of their journey in diverse forums and in the presence of different audiences.

In Chapter Six I argue that families' strategies of search not only analyse individual characteristics of disappearance cases and assess different levels of risks associated with an absence, but also facilitate their development of investigative methodologies and

forensic knowledge in order to locate their absent loved ones. For families who are continuously searching for their disappeared loved ones:

any passage of [forensic] practice cannot be foreseen or explained in advance; the future genuinely emerges in the realtime of practice. Thus, nothing necessarily endures, every single element of scientific culture –be it material, conceptual or social, is revisable in practice, and it evolves open-endedly into the future” (Pickering, 1994, p. 415).

And this is the peculiar status of being “disappeared”. Being “disappeared” entail a projection into the future. Disappearances open up possibilities; the future unfolds as family searches take place. For instance, for many of the families whose forensic practices that are examined in chapter six, their disappeared loved ones have not yet been found. However, by putting into practice/applying the knowledge that they have gathered, and by following an investigative methodology, they have been able to locate other disappeared persons.

However, boundaries can be seen to emerge on each occasion that these families performed practices of search that capture the public interest, and highlight the failure of government sponsored institutions to search, locate, and identify the disappeared. These resistances signal two things: first, that the technologies of the self (as explored chapter six) and the transformations they produced are not merely inscribed into a neoliberal framework that sees these searching strategies as part of “government at a distance”. Rather, these practices entail a way of being *less* governed by others, by finding alternative ways to govern oneself that are not those already provided by the government and its experts. Second, I have shown that, through these transformations, boundaries between “expert” and “citizen” knowledge emerge that would not exist were they not challenged. In order to explore this point further, in Chapter Seven I showed different spaces where these boundaries were made visible not only in relation to families

collecting forensic DNA data as part of the Citizen-Led Forensics (CLF) project, but also in cases where families decided to take the lead in re-appropriating forensic technologies, as in the ICRC's AM/PM form, the location of clandestine mass graves, or in my own "deliberate" use of a laboratory coat. In short, when the experiences, practices, materials and struggles to find the whereabouts of loved ones become things that matter, the boundaries between governmental or scientific authorities and forensic citizens are made visible.

Implications and Future Research Agenda

This research begins to develop an alternative, emerging understanding of how we might conceive of the practices of forensic data collection. In Mexico, a lack of trust in state institutions generates geographies of missingness and search strategies that are, hitherto, unexplored in the literature. This opens up new platforms for data transactions that have not been analytically, nor ethnographically, explored. Through my research, I show how citizens' analysis of forensic data creates new narratives of disappearance and absence that can, then, be discussed in the public sphere. Additionally, families' collection of forensic data has transformed the ways in which forensic science is practiced and understood in Mexico. For instance, since the citizens' searches of clandestine mass grave in Guerrero became public knowledge, similar practices — previously silenced in other parts of the country — gained attention and began to be acknowledged. As I have shown, this is a struggle that began before the disappearance of 43 students from Ayotzinapa, and more recent, well documented disappearances.

International interventions and institutions have concentrated their efforts on building the forensic capacity of state institutions. However, this approach deals only with one facet

of a much larger problem, and risks further harm by “empowering corrupt elites, deepening inequalities and/or perpetuating marginalisation.” Thus, raising contestations over the alignment of technologies with sovereign authorities is one way to rethink the role of forensic science during humanitarian crises (OCDE, 2016, p. 7). My research sheds light on the shortcomings of state-centric driven approaches to forensics. International organisations, such as the ICRC, and teams of forensic experts sent to Mexico to provide technical forensic assistance, could do more to acknowledge and incorporate the active participation of families into their “formal” practices of forensics. If the root of word forensics relates to the forum, it is now time to return the “forum” to forensics, allowing for disregarded subjects and their knowledges to be taken seriously.

Families in Mexico continue to fight for their knowledges and practices to be recognised. They are training themselves to deploy better search strategies — Graciela, for instance recently travelled to the FAFG in Guatemala to be trained in forensic anthropology and forensic genetics. Families are convinced that through their search for other disappeared persons, they will find their own loved ones. I have continued to stay in touch with the families in Mexico that make up the case studies of this thesis. I believe that the relationships that I have forged with them will continue for years to come, and that part of my role in producing this study is to ensure that their narratives of search will be known and acknowledged. The inclusion of citizen-led forensic practices on television programmes — such as in the season finale of *Silent Witness* and the op-ed that I contributed for Al Jazeera — provides ways to inform wider audiences of the types of forensic practices performed by the relatives of the disappeared.¹⁴⁰ My immediate plans are to publish academic and non-academic papers from this research. I am convinced that

¹⁴⁰ Schwartz-Marin and Cruz-Santiago (2014) *How citizens lead the search for Mexico's disappeared*, available at: <http://www.aljazeera.com/indepth/opinion/2014/11/how-citizens-lead-search-mexi-20141120143451575931.html> (Accessed: April, 2017); ‘*Silent Witness*’ BBC *Awakening* Part 1 and Part 2, January 2017, in which I served as an advisor.

one of the ways that forensic humanitarian practices can be transformed is through finding new and effective ways to support citizen searches in Mexico.

Aftermath

I arrived to Durham one month ago, but it has been emotionally difficult to try and write about my experiences in Mexico. I recently cried in front of my computer at my office at the university; then I knew I had to stop writing. I cannot believe all the things I saw, the stories I heard and all of the loss I have experienced. I have decided to give myself a break. And to just read or write about “happy things”. I embedded myself in children’s books and stories. Being with Camila and reading *The Gruffalo*, and *Esio Trot* are part of my daily dose of happiness. (Personal Notes, August 2015.)

References

- Acosta Lopez, J. I. (2012) 'The Cotton Field case: gender perspective and feminist theories in the Inter-American Court of Human Rights jurisprudence', *Revista Colombiana de Derecho Internacional*, 21 International Law, pp. 17-54.
- ACPO (2010) *Guidance on the Management, Recording and Investigation of Missing Persons*, National Policing Improving Agency, Second edition. Available at: ec.europa.eu/justice/fundamental-rights/files/missing_persons_sec_edn_2010_en.pdf (Accessed: August 2016)
- Ahmed, S. (2004) 'On Collective Feelings, or the Impressions Left by Others'. *Theory, Culture and Society*, 21(2), pp. 25-42.
- Alvarez Icaza, E. (2015). *La Crisis Mexicana de Derechos Humanos: Que Puede Hacer la Comunidad Internacional? [Seminario sobre Violencia y Paz]*. Colegio de México, Mexico City. January 16, 2016. Video in Spanish available at <https://www.youtube.com/watch?v=Yr0Qsw4BwiY>.
- Amnesty International (2003) *Mexico, ten years of abductions and murders of women in Ciudad Juarez and Chihuahua*. Available at: <https://www.amnesty.org/en/documents/AMR41/027/2003/en/> (Accessed: 18 October 2016).
- Amnesty International (2005) *Amnesty International Report 2005 – Mexico*. Available at: <http://www.refworld.org/docid/429b27ed5.html> (Accessed: 21 October 2016)
- Amnesty International (2017) *Disappearances. Killings and Disappearances*, Available at: <https://www.amnesty.org/en/what-we-do/disappearances/>, (Accessed: 15 March 2017).
- Amoore, L. (2006). 'Biometric Borders: Governing Mobilities in the War on Terror'. *Political Geography* 25 (3): 336–51. doi:10.1016/j.polgeo.2006.02.001.
- Amoore, L. (2011) 'Data Derivatives: Toward a Risk Security Calculus for our Times', *Theory, Culture and Society*, 28 (6). pp. 24-43.
- Amoore, L. (2013). *The Politics of Possibility: Risk and Security beyond Probability*. Durham: Duke University Press.
- Amoore, L. and De Goede M (2008a) 'Governing by risk in the war on terror', in Amoore L and de Goede M (eds) *Risk and the war on terror* Routledge, London.
- Amoore, L. and De Goede, M. (2008) 'Transactions after 9/11: the banal face of the preemptive strike'. *Transactions of the Institute of British Geographers*, 33(2): 173 – 185.
- Amoore, L. and Hall, A. (2010) "Border theatre: on the arts of security and resistance", *Cultural Geographies*, 17, p. 299 – 319.
- Anderson, B. and Wylie, J., (2009) "On geography and materiality", *Environment and Planning A*, volume 41, pp. 318 – 335.

- Anderson, J. (2009) '*Understanding Cultural Geography. Places and Traces*'. Introduction, Routledge, London, pp. 5-12.
- Archibold, R. (2014). "Lost Students Not Among Bodies Found in Mexico, Officials Say." New York Times. <http://www.nytimes.com/2014/10/15/world/americas/mexico-bodies-do-not-match-lost-students.html>.
- Barad, K. (2003) 'Posthumanist Performativity: Toward an understanding of How Matter Comes to Matter', *Journal of Women in Culture and Society*, 28(3), pp.802 – 831.
- Barry, A., Osborne, T., Rose, N.,(eds.) (1996) *Foucault and Political Reason. Liberalism, neo-liberalism and rationalities of government*, London: The University of Chicago Press.
- Bayliss, A. and Quinton, P.(2013) *Risk, bureaucracy and missing persons. An evaluation of a new approach to the initial police response*, College of Policing, available at: whatworks.college.police.uk/Research/Documents/Missing_persons_PUBLICATION_PQ.pdf (Accessed: 27th, March, 2017).
- Belcher, O. and Martin, L. (2013) 'Ethnographies of closed doors: conceptualising openness and closure in US immigration and military institutions', *Area*, 45(4), pp. 403-410.
- Bennet, C. (2014) 'Who knows who we are? Questioning DNA analysis in disaster victim identification', *New Genetics and Society*, 33, pp. 239–256.
- Biehal, N. and Wade, J. (2004). *Children who go missing: Research, policy and practice*. UK: Social Work Research and Development Unit: University of York.
- Biehal, N., Mitchell, F., Wade, J. (2003) *Lost from view: A Study of Missing People in the United Kingdom*, Bristol: Policy Press.
- Bloor, D. (1981) 'The Strengths of the Strong Programme', *Philosophy, Society and Science*, 11, pp. 199-213.
- Boss, P. (2013) 'Resilience as tolerance for ambiguity', in Becvar, D. (Ed.), *Handbook of Family Resilience*, Springer, New York, pp. 285-297.
- Boss, P.G. and Carnes, D., (2012) 'The myth of closure', *Family Process*, 51(4), pp. 456-469.
- Brand, F.S., and K. Jax, (2007) 'Focusing the meaning(s) of resilience: resilience as a descriptive concept and a boundary object', *Ecology and Society*, 12(1), p. 23.
- Burchell, G. (1996) 'Liberal government and techniques of the self', in Barry, A., Osborne, T., Rose, N., (Eds.) *Foucault and Political Reason. Liberalism, neo-liberalism and rationalities of government*, London: The University of Chicago Press, pp. 19-36.
- Cacho, L. (2009) '¿Quién mato a Esther Chávez Cano?', *El Universal*, 26 December. Available at: <http://archivo.eluniversal.com.mx/estados/74216.html> (Accessed: September 14th, 2016).
- Callon, M. (1987) "Society in the making: the study of technology as a tool for sociological analysis", in Bijker, Wiebe E.; Hughes, Thomas P.; Pinch, Trevor (eds) *The*

social construction of technological systems: new directions in the sociology and history of technology [online], Cambridge, Massachusetts: MIT Press, pp. 77 – 98.

Callon, M. (1999) 'The Role of Lay People in the Production and Dissemination of Scientific Knowledge', *Science, Technology and Society*, 4(1), pp. 81-94.

Cañas, J., Coronado, R., Gilmer, R.W. and Saucedo, E. (2013), 'The Impact of the Maquiladora Industry on U.S. Border Cities', *Growth and Change*, 44(3), pp. 415–442.

Carter-White, R. (2009), 'Auschwitz, Ethics, and Testimony: Exposure to the Disaster', *Environment and Planning D: Society and Space*, 27, pp. 682–699.

Carvalho, A. (2014) *Performing Meditation: Vipassana and Zen as Technologies of the Self*, PhD dissertation, University of Exeter, unpublished.

CNDH (2001) *Informe Especial sobre las quejas en materia de Desapariciones Forzadas ocurridas en la década de los 70 y principios de los 80*. México, Comisión Nacional de los Derechos Humanos. Available at: http://www.cndh.org.mx/sites/all/doc/Informes/Especiales/2001_Desapariciones70y80.pdf (Accessed: October 2016).

Cole, S.A. (2002). *Suspect Identities: A History of Fingerprinting and Criminal Identification*. Cambridge: Harvard University Press.

Cole, S.A. (2012) 'Forensic culture as epistemic culture: The sociology of forensic science', *Studies in History and Philosophy of Science part C: Studies in History and Philosophy of Biological and Biomedical Sciences*, Available at: <http://www.sciencedirect.com/science/article/pii/S1369848612000970>

Collins, HM and Evans, R. (2002) 'The Third Wave of Science Studies: Studies of Expertise and Experience', *Social Studies of Science*, 32 (2), pp. 235 – 296.

Collins, HM and Evans, R. (2016) 'A thousand words is worth a picture', *Social Studies of Science*, 46(2), pp.312 – 324.

COLMEX (2016) *En el Desamparo: Los Zetas, el Estado, la sociedad y las victimas de San Fernando, Tamaulipas (201), y Allende, Coahuila (2011)*, Ciudad de Mexico, Available at: <http://eneldesamparo.colmex.mx/images/documentos/en-el-desamparo.pdf> (Accessed: October 2016)

Cozzens, S. and Woodhouse, E., (1995) 'Science Government and the Politics of Knowledge' in Hackett, E. Amsterdamska, O., Lynch, M. and Wajcman, J. (eds) *Handbook of Science and Technology Studies*, pp.533 - 553, London, Sage.

Crang, M., Cook, I., (2007). *Doing ethnographies*. SAGE, London; Thousand Oaks, Calif.

Cuevas, J. (2015). "Los otros desaparecidos" llevan a la CIDH a la zona de fosa de Iguala. Available at: <https://agenciaperiodistica.wordpress.com/2015/10/01/los-otros-desaparecidos-llevar-a-la-cidh-a-la-zonade-fosas-de-iguala/>. Accessed October 2015.

Darling, J. (2017). 'Acts, Ambiguities, and the Labour of Contesting Citizenship'. *Citizenship Studies* 21 (6): 727–36. doi:10.1080/13621025.2017.1341658.

- Darling, J. (2014) 'Emotions, Encounters and Expectations: The uncertain Ethics of 'The Field'', *Journal of Human Rights Practice*, 6(2), pp. 201-212.
- Daston, L. (2009) 'Science Studies and the History of Science', *Critical Inquiry*, 35, pp. 798 – 813.
- Daston, L. and Galison, P. (2007) *Objectivity*. New York: MIT Press.
- Daston, L. and Park, K. (1998) *Wonders and the order of nature, 1150-1750*, New York: Zone Books; Cambridge, Mass.
- Dauphinee, E. and Masters, C. (Eds.) (2007) *The Logics of Biopower and the War on Terror*, Palgrave Macmillan, New York, 2007. "Introduction: Living, Dying, Surviving I", pp: vii-xix.
- De Laet, M. and Mol, A., (2000) 'The Zimbabwe Bush Pump: Mechanics of a Fluid Technology', *Social Studies of Science*, 30, pp. 225 – 263.
- Dearden, L. (2014). 'Remains of Kidnapped Ugandan Priest Found in Mexico Mass Grave with 13 Other Bodies'. The Independent, Americas, November. <http://www.independent.co.uk/news/world/americas/remains-of-kidnapped-ugandan-priest-found-in-mexico-mass-grave-with-13-other-bodies-9863069.html>
- Del Savio, L., Prainsack, B. and Buyx, A. (2016). 'Crowdsourcing the Human Gut. Is Crowdsourcing Also "Citizen Science"?' *Journal of Science Communication* 15 (3): 1–16.
- Diario Oficial de la Federación (2015) *ACUERDO A/094/15 por el que se crea la Fiscalía Especializada de Búsqueda de Personas Desaparecidas, y se establecen sus facultades y organización*, 9th of October, Available at: http://www.dof.gob.mx/nota_detalle.php?codigo=5411119&fecha=09/10/2015 (Accessed: January 2017)
- Dieterich, H. (1986) 'Enforced Disappearances and Corruption in Latin America', *Crime and Social Justice*, 25, pp. 40-54.
- Dillman, C.D. (1976) 'Maquiladoras in Mexico's northern border communities and the border industrialization program', *Journal of Economic and Social Geography*, 67 (3), January, pp.138-150.
- Doretti, M. (2009) *Launch of the AAAS Science and Human Rights Coalition*, [Public Speech] Washington DC, January 14. Available at: <https://www.aaas.org/page/mercedes-doretti> (Accessed: September 2016).
- Doretti, M. (2009a) *Testimony of Mercedes Doretti before the Inter-American Court of Human Rights*, 17 April.
- Doretti, M. and J. Burrell. (2007). 'Gray Spaces and Endless Negotiations: Forensic Anthropology and Human Rights' in *Anthropology put to Work*, Les Field and Richard G Fox, (eds), BERG: Oxford.

- Dunn, E.C. (2012) 'The Chaos of Humanitarian Aid: Adhocracy in the Republic of Georgia', *Humanity: An International Journal of Human Rights, Humanitarianism, and Development*, 3 (1), pp. 1-23.
- Dutrenit, S. and Jaloma, E. (2014) 'Recuerdos y relatos sobre la búsqueda de un detenido desaparecido en Mexico', *Estudios*, 31(Enero-Junio), pp. 181-202.
- EAAF (2001) "*Equipo Argentino de Antropología Forense*" *Reporte Anual*, Available at: http://eAAF.typepad.com/cr_mexico/ (Accessed: October 2016).
- EAAF (2002) "*Equipo Argentino de Antropología Forense*" *Reporte Anual*, Available at: http://eAAF.typepad.com/cr_mexico/ (Accessed: October 2016).
- EAAF (2005) "*Equipo Argentino de Antropología Forense*" *Reporte Anual*, Available at: http://eAAF.typepad.com/cr_mexico/ (Accessed: October 2016).
- EAAF (2006) "*Equipo Argentino de Antropología Forense*" *Reporte Anual*, Available at: http://eAAF.typepad.com/cr_mexico/ (Accessed: October 2016).
- EAAF (2007) "*Equipo Argentino de Antropología Forense*" *Reporte Anual*, Available at: http://eAAF.typepad.com/cr_mexico/ (Accessed: October 2016).
- EAAF (2007-2009) "*Equipo Argentino de Antropología Forense*" *Reporte Anual*, Available at: http://eAAF.typepad.com/cr_mexico/ (Accessed: October 2016).
- Edkins, J. (2001) 'The Absence of Meaning: Trauma and the Events of 11 September', *INFO interventions*, Available at: <http://www.infopeace.org/911/article.cfm?id=27> (Accessed: November 2016).
- Edkins, J. (2010) 'Missing Persons: London, July 2005' in A. Stephens, N. Vaughan-Williams (eds), *Terrorism and the Politics of Response*. Routledge Critical Terrorism Studies, Taylor & Francis, London, pp. 19-43.
- Edkins, J. (2011) *Missing: Persons and Politics*, Cornell University Press, Ithaca, NY.
- Edkins, J. (2013) 'When someone disappears people find that they didn't really know the missing person as well as they thought', *The Independent On-line*, Sunday 16 June 2013. <http://www.independent.co.uk/voices/comment/professor-jenny-edkins-when-someone-disappears-people-find-that-they-didnt-really-know-the-missing-person-as-well-as-they-thought-8660580.html>
- Edmond, G. (2001) 'The Law-set: The Legal-Scientific Production of Medical Propriety', *Science, Technology, & Human Values*, 26(2), pp. 191-226.
- Ellis, C., & Bochner, A. P. (2000). Autoethnography, personal narrative, reflexivity: Researcher as subject. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp. 733-768). Thousand Oaks, CA: Sage
- EPAF-EMAF (2015) EPAF-EMAF Joint Statement, web page blog 4th of December 2014. Available at: <http://epafperu.org/en/pronunciamiento-epaf-ema/>
- Epstein, S. (1995) 'The construction of Lay Expertise: AIDS Activism and the Forging of Credibility in the Reform of Clinical Trials', *Science Technology Human Values*, vol. 20(4): 408-437.

- Ericson, A. (1970) 'An analysis of Mexico's border industrialization program', *Monthly Labor Review*, 93(5), pp. 33-40.
- Feely, M. and Simon, J. (1992) 'The New Penology: Notes on the Emerging Strategy of Corrections and its Implications', *Criminology*, 30 (4), pp. 449-474.
- Fine, G. (2003) 'Towards a Peopled Ethnography: Developing Theory from Group Life'. *Ethnography* 4(1), pp.41-60.
- Forensic Science Foundation (2017) *Who we are*, Available at: <https://fsf.aafs.org/> (Accessed: January, 2017).
- Foucault, M. (1979) *Discipline and Punish: The Birth of the Prison*, New York: Vintage Books.
- Foucault, M. (1988) 'Technologies of the self', in Luther, H.M., et. al.(Eds.), *Technologies of the self. A seminar with Michel Foucault*, United States: The University of Massachusetts Press, pp. 16-49.
- Foucault, M. (2005) *The Hermeneutics of the Subject: Lectures at the College De France, 1981-1982*. Basingstoke: Palgrave MacMillan.
- Foucault, M. (2007) *Security, Territory, Population. Lectures at the College de France 1977 – 1978*, Palgrave Macmillan, New York.
- Foucault, M. (2008) *The Birth of Biopolitics: Lectures at the Collège de France, 1978-1979*, Palgrave Macmillan, New York.
- Frers, L. (2013) 'The matter of absence', *Cultural Geographies*, 20(4), pp. 431-445.
- Fyfe, N., Parr, H., Stevenson, O., Woolnough, P. (2015) 'To the End of the World': Space, Place, and Missing Persons Investigations. *Policing*, 9(3), pp. 275 – 283.
- Fyfe, N., Stevenson, O., Woolnough, P. (2015) "Missing persons: the processes and challenges of police investigation" *Policing and Society*, 25(4), pp. 409-425.
- Garland, D. (1997) 'Governmentality' and the problem of crime: Foucault, *Criminology*, *Sociology*, *Theoretical Criminology* 1(2): 173-214.
- GIEI, (2016) *Informe Ayotzinapa II. Avances y Nuevas Conclusiones sobre la Investigación, Búsqueda y Atención a las Víctimas*. Available at: http://media.wix.com/ugd/3a9f6f_7e190b69e1b14980add30c4aa015d2e8.pdf (Accessed, October, 2016).
- Goñi, U. (2016) 'Blaming the victims: dictatorship denialism is on the rise in Argentina', *The Guardian*, 29th August. Available at: <https://www.theguardian.com/world/2016/aug/29/argentina-denial-dirty-war-genocide-mauricio-macri>
- Grillo, I. (2014) 'Mexico Govt Struggles to Control Cartel-Run Highways', *Insight Crime. Investigation and Analysis of Organized Crime*, Monday, 21 July. Available at: <http://www.insightcrime.org/news-analysis/mexico-govt-struggles-to-control-cartel-run-highways>

- Haklay, M. (2015). 'Citizen Science and Policy: A European Perspective'. Washington DC, U.S.A.: The Woodrow Wilson Centre.
https://www.wilsoncenter.org/sites/default/files/Citizen_Science_Policy_European_Perspective_Haklay.pdf.
- Haimes, E. and Toom, V. (2014) 'Hidden in full sight: kinship, science and the law in the aftermath of the Srebrenica genocide', *New Genetics and Society*, 33 (3), pp.277-294.
- Haraway, D. (1988) 'Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective', *Feminist Studies*, 14 (3), pp. 575 – 599.
- Harrison, P (2011) 'Flētum: A prayer for X', *Area*, 43, pp. 158 -61.
- Heinle, K., Rodriguez Ferreira, O. and Shirk, D. (2016) *Drug Violence in Mexico: Data and Analysis Through 2015*. Sand Diego: Justice in Mexico.
<https://justiceinmexico.org/wp-content/uploads/2016/04/DrugViolenceinMexico-Final-2015.pdf> (Accessed: 10 March 2017)
- Hetherington, K. (2004) 'Second-handedness: Consumption, Disposal and Absent Presence', *Environment and Planning D: Society and Space*, 22(1), pp. 157 – 173.
- Hyndman, J. (2007) 'Feminist Geopolitics Revisited: Body Counts in Iraq', *The Professional Geographer* 59(1), pp. 35-46.
- IACHR (1994) *Inter-American Convention on "The Prevention, Punishment and Eradication of Violence Against Women "Convention Of Belem Do Para"*, Available at: <http://www.oas.org/juridico/english/treaties/a-61.html> (Accessed: 28 September, 2016).
- IACHR (2002) *Report 16/05 - Admissibility, Petition 281/02, Claudia Ivette González, Mexico*. Available at: <http://www.oas.org/en/iachr/women/decisions/iachr.asp> (Accessed: September 2016).
- IACHR (2002) *Report 17/05 - Admissibility, Petition 282/02, Esmeralda Herrera Monreal,*
- IACHR (2002) *Report 18/05 – Admissibility, Petition 283/02, Laura Berenice Ramos Monarrez,* Mexico. Available at: <http://www.oas.org/en/iachr/women/decisions/iachr.asp> (Accessed: September 2016).
- IACHR (2002) *Report No. 32/06 – Admissibility, Petition 1175-03, Paloma Angélica Escobar Ledezma et al., Mexico*. Available at: <http://www.oas.org/en/iachr/women/decisions/iachr.asp> (Accessed: September 2016).
- IACHR (2003) *The situation of the Rights of Women in Ciudad Juarez, Mexico: The right to be free from violence and discrimination*. Available at: www.cidh.oas.org/annualrep/2002eng/chap.vi.juarez.htm (Accessed: 26 September, 2016).
- IACHR (2006) *Report on the petition of admissibility of the Case Paloma Angélica Escobar Ledezma et al. Mexico*. Available at: <http://cidh.org/annualrep/2006eng/Mexico.1175.03eng.htm#ftn2> (Accessed: May 2016).

IACHR (2007) *Application filed with the Inter-American Court of Human Rights in the case of Campo Algodonero: Claudia Ivette Gonzalez, Esmeralda Herrera Monreal and Laura Berenice Ramos Monarrez Cases 12.496, 12.497 and 12.498 against the United Mexican States*. November 4th, 2007, Mexico. Available at: <http://www.oas.org/en/iachr/women/decisions/iachr.asp> (Accessed: September 2016).

IACHR (2009) *Inter-American Court of Human Rights Case of Radilla-Pacheco v. Mexico Judgment of November 23, 2009 (Preliminary Objections, Merits, Reparations, and Costs)*, Available at: http://www.corteidh.or.cr/docs/casos/articulos/seriec_209_ing.pdf (Accessed: October 2016).

ICRC (2013) International Committee of the Red Cross, The Ante-Mortem/Post-Mortem Database, an information management application for forensic data. Report available at: <https://www.icrc.org/eng/resources/documents/report/ante-mortem-post-mortem-database-report.htm> Last time visited: 7th February, 2017

INEGI, (2015), *Territorio de Mexico*, Available at: <http://www.cuentame.inegi.org.mx/monografias/informacion/chih/territorio/default.aspx?tema=me&e=08> (Accessed: 18 February 2016).

Ingold, T. (2009) 'Stories against classification: transport, wayfaring and the integration of knowledge' in *Kinship and beyond: the genealogical model reconsidered* (eds) S. Bamford & J. Leach, Oxford: Berghahn, pp.192 – 213.

Ingold, T. (2010) 'Footprints through the weather-world: walking, breathing, knowing'. *Journal of the Royal Anthropological Institute* (N.S.), pp. S121 – S139.

Innes M. (2002). 'The Process Structure of Police Homicide Investigations.' *The British Journal of Criminology* 42(4): 669–688.

INTERPOL (2014) *Disaster Victim Identification Guide*, Lyon: INTERPOL.

Isin, E. (2017). 'Performative Citizenship'. In *The Oxford Handbook of Citizenship*, 500–523. Oxford Handbooks. New York, NY: Oxford University Press.

Isin, E., and Nielsen. G.N. (2008). *Acts of Citizenship*. London: Zed Books.
<http://search.ebscohost.com/login.aspx?direct=true&db=nlebk&AN=260783&site=ehost-live>.

Isin, E. (2009). 'Citizenship in Flux: The Figure of the Activist Citizen'. *Subjectivity* 29 (1): 367–88. doi:10.1057/sub.2009.25.

Isin, E. and Turner, B.T. (2007). 'Investigating Citizenship: An Agenda for Citizenship Studies'. *Citizenship Studies* 11 (1): 5–17. doi:10.1080/13621020601099773.

Jasanoff, S. (1995) *Science at the Bar: Law, science and technology in America*. Cambridge, Mass: Harvard University Press.

Jasanoff, S. (1998) 'The eye of everyman: Witnessing DNA in the OJ Simpson trial', *Social Studies of Science*, 28, 5/6, pp.713-740.

- Jasanoff, S. (2007) 'Making Order: Law and Science in Action' in Hackett, E. Amsterdamska, O., Lynch, M. and Wajcman, J. (eds) *Handbook of Science and Technology Studies*, pp.761-786, Boston, MA: MIT Press.
- Jeffreys, A.J., V. Wilson, and S.L. Thein (1985) 'Individual-Specific 'Fingerprints' of Human DNA', *Nature*, 316: 76-79.
- Jimenez, G. (2014) 'Software indetificara cadaveres', *Excelsior*, 19 Julio, available at: <http://www.excelsior.com.mx/comunidad/2014/07/19/971694#imagen-2> (Accessed: January 2015)
- Keenan, T. and Weizman, E. (2012) *Mengele's Skull: The Advent of a Forensic Aesthetics*, Berlin: Sternberg Press.
- Kim, J. and Katsanis, S.H. (2013) 'Brave new world of human rights DNA collection' *Trends in Genetics*, 29(6), pp. 329-332.
- Kindon, S., Pain, R., and Kesby, M. (eds) (2007) *Participatory Action Research Approaches and Methods: Connecting People, Participation, and Place*. London: Routledge.
- Knorr Cetina, K. (1995) 'Laboratory Studies. The Cultural Approach to the Study of Science', *Handbook of Science and Technology Studies*, Sage Publications, pp. 140-166.
- Latour, B. (1983) "Give Me a Laboratory and I will Raise the World" in Knorr-Cetina, K. and Mulkay, M., *Science Observed. Perspectives on the Social Study of Science*, SAGE Publications, Great Britain.
- Latour, B. (1986) 'Visualisation and Cognition: Thinking with eyes and hands', in H. Kuklick (ed.) *Knowledge and Society Studies in the Sociology of Culture Past and Present*, Jai Press, 6, pp. 1-40.
- Latour, B. (1987) *Science in Action: How to Follow Scientists and Engineers through Society*, Cambridge, MA: Harvard University Press.
- Latour, B. (2005) *Reassembling the social. An Introduction to Actor Network Theory*. Oxford: Oxford University Press.
- Latour, B. and Woolgar, S. (1986) *Laboratory life: the construction of scientific facts*, Princeton University Press.
- Law, J. (2004) *After Method: Mess in Social Science Research*. London: Routledge, Chapter 3, pp. 45 – 69.
- Lawless, C. (2011) 'Policing Markets: The Contested Shaping of Neoliberal Forensic Science', *British Journal of Criminology*, 51(4), pp. 671-689.
- Lawless, C. (2013) 'The low template DNA profiling controversy: Biolegality and boundary work among forensic scientists', *Social Studies of Science*, 43(2): 191-214.
- Lawless, C. (2016) *Forensic Science: A Sociological Introduction*, London: Routledge.
- Lentzos, F. and Rose, N. (2009) 'Governing insecurity: contingency planning, protection, resilience', *Economy and Society*, 38 (2), pp. 230 – 254.

Lynch, M. (2012) 'Science, truth, and forensic cultures: The exceptional legal status of DNA evidence', *Studies in History and Philosophy of Science part C: Studies in History and Philosophy of Biological and Biomedical Sciences*.

Lynch, M and Woolgar, S.(eds) (1990) *Representation in Scientific Practice*, Cambridge, Massachusetts: MIT Press.

Lynch, M. and S. Jasanoff. (1998). 'Contested Identities: Science, Law and Forensic Practice.' *Social Studies of Science* 28 (5–6): 675–686.

Lynch, M. and McNally, R. (2003) "'Science,'" "common sense," and DNA evidence: a legal controversy about the public understanding of science', *Public Understanding of Science*, 12(1), pp. 83-103.

Lynch, M., Cole, S.A., McNally, R. and Jordan, K. (2008) *Truth Machine: The Contentious History of DNA Fingerprinting*, Chicago: University of Chicago Press.

Madariaga, A. (2008). *Las Abuelas y la Genética: El Aporte de la Ciencia en la Búsqueda de los Chicos Desaparecidos*. Buenos Aires: Abuelas de Plaza de Mayo.

M'charek, A. (2000). 'Technologies of Population: Forensic DNA Testing Practices and the Making of Differences and Similarities.' *Configurations* 8 (1): 121–158.

M'charek, A. (2008) 'Silent witness, articulate collective: DNA evidence and the inference of visible traits', *Bioethics*, 22(9), pp.519-528.

Madrell, A. (2013) 'Living with the deceased: absence, presence and absence-presence', *Cultural Geographies*, 20(4), pp. 501-522.

Maestri, G. and Hughes, S.M. (2017). 'Contested Spaces of Citizenship: Camps, Borders and Urban Encounters'. *Citizenship Studies* 21 (6): 625–39.
doi:10.1080/13621025.2017.1341657.

Martinez, S. (2013) 'Surge en México una "privatización de las desapariciones", alerta experto de la ONU', *La Jornada*, 16 June, p.15.

McFarlane, C. (2004) *Travelling knowledges: urban poverty and slum/shack dwellers international*, Durham theses, Durham University. Available at Durham E-Theses Online: <http://etheses.dur.ac.uk/3126/>

Meier, L., (2013) 'Encounters with haunted Industrial Workplaces and Emotions of Loss – Class Related Senses of Place within the Memories of Metalworkers', *Cultural Geographies*.

Meier, L., Frers, L., Sigvardsdotter, E., (2013) "The importance of absence in the present: practices of remembrance and the contestation of absences" *Cultural Geographies*, 20(4), pp. 423 – 430.

Mendoza, E., (2012) El Sexenio de las 71 mil ejecuciones, Reporte Índigo, 06 de Junio. Available at: <http://www.reporteindigo.com/reportes/mexico/el-sexenio-de-las-71-mil-ejecuciones>

Meyer, M. (2012) "Placing and tracing absence: A material culture of the immaterial", *Journal of Material Culture*, 17 (1), pp. 103 – 110.

- Meyer, M. and Woodthorpe, K., (2008) The Material Presence of Absence: a dialogue between museums and cemeteries, *Sociological Research Online*, 13(5).
- Miglierini, J. (2011) 'Drugs war strains Mexico's forensic investigators', BBC News, Mexico City, Available at: <http://www.bbc.co.uk/news/world-latin-america-13857056> (Accessed: September 2016).
- Missing People (2012) *An Uncertain Hope: Missing People's overview of the theory, research and learning about how it feels for families when a loved one goes missing*, Available at: <http://www.missingpeople.org.uk/about-us/about-the-issue/research/12-missing-people-research.html> Accessed: 09 June, 2014.
- Mol, A. (1999). 'Ontological politics. A word and some questions' in *Actor network theory and after* (eds) J. Law and J. Hassard, Oxford: Blackwell Publishers, pp. 74–90.
- Mol, A. (2014) *A reader's guide to the "ontological turn" – Part 4*, Somatosphere, Available at: <http://somatosphere.net/2014/03/a-readers-guide-to-the-ontological-turn-part-4.html> (Accessed: June 2016)
- Mol, A. and Law, J. (1994) 'Regions, Networks and Fluids: Anaemia and Social Topology', *Social Studies of Science*, Vol. 24, p. 641 – 671.
- Moon, C. (2012) "'Who'll pay reparations on my soul?" Compensation, social control and social suffering', *Social and Legal Studies*, 21/2: 187-199.
- Moon, C. (2013). 'Interpreters of the Dead: Forensic Knowledge, Human Remains and the Politics of the Past'. *Social & Legal Studies* 22 (2): 149–69.
- Moon, C. (2016) 'Human rights, human remains: forensic humanitarianism and the human rights of the dead', *International Social Science Journal*, 65/215-216: 49-63.
- Moore, L. (1997). 'It's Like You Use Pots and Pans to Cook. It's the Tool': The Technologies of Safer Sex. *Science, Technology, & Human Values*, 22(4), 434-471. Retrieved from <http://www.jstor.org/stable/689831>
- Morton, A.D. (2012). 'The War on Drugs in Mexico: A Failed State?' *Third World Quarterly* 33 (9): 1631–45. doi:10.1080/01436597.2012.720837.
- Murzi, M. (no date) 'Vienna Circle', *The Internet Encyclopaedia of Philosophy*, ISSN 2161-0002, Available at: <http://www.iep.utmedu/> (Accessed: 7th December, 2016)
- Nájar, (2012) 'Los huesos que esperan justicia en Ciudad Juárez', BBC Mundo, Available at: http://www.bbc.com/mundo/noticias/2012/03/120308_huesos_justicia_mexico_juarez_an.shtml (Accessed: September 2016).
- National Crime Agency (2016) *iFIND*, Internal Report for search trained personnel only, Available at: missingpersons.police.uk/en/resources/ifind (Accessed: October, 2016).
- O'Malley, P. (1996) 'Risk and Responsibility', in A. Barry, T. Osborne and N. Rose (Eds) *Foucault and Political Reason. Liberalism, neo-liberalism and rationalities of government*, London: The University of Chicago Press, pp. 19-36.
- O'Malley, P. (2004) *Risk, Uncertainty and Government*. London: Cavendish.

- O'Malley, P. (2010) 'Resilient Subjects: Uncertainty, Warfare and Liberalism, Legal Studies Research Paper', University of Sydney. Sydney Law School, No. 10/39, pp. 1-39.
- Olsen, M. (2008) 'The Amateur Search' *ACM SIGMOND Rec.* 37 (2), pp. 21 – 24.
- Open Society (2016) *Undeniable Atrocities. Confronting Crimes Against Humanity in Mexico*, New York, Available at: <https://www.opensocietyfoundations.org/reports/undeniable-atrocities-confronting-crimes-against-humanity-mexico> (Accessed: August 2016)
- Ottinger, G. (2013) 'Changing Knowledge, Local Knowledge, and Knowledge Gaps: STS Insights into Procedural Justice', *Science, Technology & Human Values*, 38(2), pp. 250 – 270.
- Parr, H. and Fyfe, N., (2013) "Missing Geographies" *Progress in Human Geography*, 37, pp. 615 – 638.
- Parr, H. and Stevenson O. (2013) *Missing People, Missing Voices: Stories of Missing Experience*, unpublished project resource. Available at: <http://www.geographiesofmissingpeople.org.uk/downloads/missingvoices.pdf>, (Accessed: September 2016)
- Parr, H. and Stevenson, O. (2013a) *Missing People, Missing Voices: Stories of Missing People*. [Report Online]. University of Glasgow, Glasgow, UK. Available at: www.geographiesofmissingpeople.org.uk (Accessed: October 2015)
- Parr, H. and Stevenson, O. (2014) 'Sophie's story: writing missing journeys', *Cultural Geographies*, 21, pp. 565-582.
- Parr, H. and Stevenson, O. (2014a) 'No news today': Talk of witnessing with families of missing people, *Cultural Geographies*, pp. 1 – 19.
- Parr, H. (2015) 'Investigating missing persons: learning from interviews with families'. *Journal of Homicide and Major Incident Investigation*, 10(1), pp. 1-13.
- Parr, H., Stevenson, O., Fyfe, N., Woolnough, P., (2015) "Living absence: the strange geographies of missing people", *Environment and Planning D: Society and Space*, 33, pp. 191 – 208.
- Parr, H.; Stevenson, O.; Woolnough, P. (2016) 'Search/ing for missing people: Families living with ambiguous absence'. *Emotion, Space and Society*, 19, pp. 66-75.
- Parr, H; and Stevenson, O. (2013) *Families living with absence: Searching for missing people*. [Report Online]. University of Glasgow, Glasgow, UK. Available at: www.geographiesofmissingpeople.org.uk (Accessed: October 2015)
- Payne, M. (1995) 'Understanding 'going missing': issues for social work and social services', *British Journal of Social Work*, 25, pp. 333-348
- Pickering, A. (1992) From Science as Knowledge to Science as Practice in Andrew Pickering (ed.) *Science as Practice and Culture*, Chicago, IL: The University of Chicago Press, pp. 1-26.

- Pickering, A. (1993) 'The Mangle of Practice: Agency and Emergence in the Sociology of Science', *American Journal of Sociology*, 99 (3), pp. 559 – 589.
- Pickering, A. (1995a) *The Mangle of Practice: Time, Agency, and Science*, Chicago: University of Chicago Press.
- Pickering, A. (2016 forthcoming) 'The Ontological Turn: Taking Different Worlds Seriously, to appear in *Social Analysis* 2016.
- Pickering, A. (ed.) (1992) *Science as Practice and Culture*, Chicago: University of Chicago Press.
- Pigna, F. (2008) *Lo Pasado Pensado. La Conferencia de Videla (1979)*. Available at: <https://www.youtube.com/watch?v=7PCzaoEPv10> (Accessed: 14 March 2017).
- Poniatowska, E. (2016) *The Sorrows of Mexico. An Indictment of their country's failings by 7 Exceptional Writers*. MacLehose Press.
- Prainsack, B., Schiktanz, S. and Werner-Felmayer, G. (2017). *Genetics as Social Practice: Transdisciplinary Views on Science and Culture*. London; New York: Routledge. <http://www.tandfebooks.com/isbn/9781315584300>.
- Prainsack, B. and Kitzberger, M. (2009) 'DNA behind bars: Other ways of knowing forensic DNA technologies', *Social Studies of Science*, 39(1), pp. 51-79.
- Proceso (2011) Javier Sicilia: Carta abierta a políticos y criminales, Reportaje Especial, 3 Abril 2011, <http://www.proceso.com.mx/266990/javier-sicilia-carta-abierta-a-politicos-y-criminales>
- Radford, J. and Russell, D.E.H (eds.), *Femicide: The Politics of Woman Killing*, New York, Twayne Publishers, 1992.
- Ramos-Francia, M. and Chiquiar, D. (2005) 'Trade and business-cycle synchronization: Evidence from Mexican and U.S. manufacturing industries' *North American Journal of Economics and Finance*, 16(2): 187–216.
- Ranalleti, M. (2014) 'When death is not the end: towards a typology of the treatment of corpses of 'disappeared detainees' in Argentina from 1975 to 1983' in Anstett, E. and Dreyfus J.M. (ed.) *Destruction and Human Remains. Disposal and Concealment in Genocide and Mass Violence*. Manchester: Human Remains and Violence, Manchester University Press, p. 146 – 179.
- Ray, Larry (2011) *Violence & Society*. London Sage. UK
- Robledo, C. (2012) *Drama social y política del duelo de los familiares de desaparecidos en Tijuana en el marco de la 'Guerra contra el Narcotráfico' (2006-2012)*, COLMEX PhD. Dissertation.
- Rose, G. (1997) Situating Knowledges: Positionality, Reflexivity and Other tactics. *Progress in Human Geography*, 21(3), pp. 305 – 20.
- Rose, N. (1996) 'Governing "advanced" liberal democracies' in Barry, A., Osborne, T., Rose, N., (Eds.) *Foucault and Political Reason. Liberalism, neo-liberalism and rationalities of government*, London: The University of Chicago Press, pp. 37-64.

- Rose, N. (1999) *Governing the Soul: The shaping of the private self*. Free Association Books.
- Rose, N. and Novas, C. (2008) 'Biological Citizenship', in Ong, Aihwa; Collier, Stephen J. (eds) 2008., *Global Assemblages. Technology, Politics, and Ethics as Anthropological Problems* [online]. Wiley-Blackwell
- Rosenblatt, A., (2015). *Digging the disappeared: forensic science after atrocity*. Stanford University Press, Stanford, California.
- Ruddick, S. (1989) *Maternal Thinking: Towards a politics of peace*, London, Womens Press.
- Ruse, J. (2015) *Living with the pain of home: An ethnography of political activism amongst Mexican migrants in Catalonia*, Durham theses, Durham University. Available at Durham E-Theses Online: <http://etheses.dur.ac.uk/11224>
- Scholl, S. (2015) "Mexico: Challenging drug prohibition from below", *Transnational Institute*, ISBN/ISSN 2405-7592, available at: <https://www.tni.org/en/briefing/mexico-challenging-drug-prohibition-below>
- Schwartz-Marin E., Wade, P., Cruz-Santiago, A., Cardenas, R., (2015) Colombian Forensic Genetics as a form of public science: the role of race, nation and common sense in the stabilisation of DNA populations, *Social Studies of Science*. 45(6), pp. 862-885
- Schwartz-Marin, E., & Cruz-Santiago, A (2014) How citizens lead the search for Mexico's disappeared. Al Jazeera, World News, 20th of November, available at: <http://www.aljazeera.com/indepth/opinion/2014/11/how-citizens-lead-search-mexi-20141120143451575931.html> (Opinion Editorial)
- Sense about Science, (2017) *Making Sense of Forensic Genetics*, EUROFORGEN, Available at: <http://senseaboutscience.org/activities/making-sense-of-forensic-genetics/> (Accessed: March, 2017).
- Sigvardsson, E. (2012) 'Presenting absent bodies: undocumented persons coping and resisting in Sweden', *Cultural Geographies*, 20(4), pp. 523-539.
- Sigvardsson, E. (2012a) *Presenting the Absent: An Account of Undocumentedness in Sweden*. PhD Thesis. Department of Social and Economic Geography, Uppsala University. Available at: <http://uu.diva-portal.org/smash/record.jsf?searchId=1&pid=diva2%3A516978&dswid=-8492> (Accessed: May 2016).
- Silberman, S (2007) Inside the High-Tech Hunt for a Missing Silicon Valley Legend, *Wired Magazine*, issue 15.
- Silva Juarez, A. (2014) 'Segob y PGR presentan avances del Plan Nacional de Búsqueda de Personas No Localizadas' Newspaper article, *Estado Mayor*, Available at: <http://www.estadomayor.mx/44965> (Accessed: 7th February, 2017)
- Simons, J. (1996) 'Foucault's Mother' in Susan J. Hekman (ed), *Feminist Interpretations of Michel Foucault*, The Pennsylvania State University Press, pp. 179 – 209.

- Sismondo, S. (2010) *An Introduction to Science and Technology Studies*, Second Edition, Oxford: Wiley-Blackwell.
- Smith, L. and Wagner, S. (2007) 'DNA Identification: Checking Expectations of Truth and Justice', *Anthropology News*, 48(5).
- Snow, C., Stover, E, Hannibal K. (1992) "Scientists as Detectives: Investigating Human Rights" in Claude, P R. and Weston H. Burns, Eds. *Human Rights in the World Community: Issues and Action*, University of Pennsylvania Press.
- South, R.B. (1990) 'Transnational "Maquiladora" Location', *Annals of the Association of American Geographers*, 80(4), pp.549-570.
- Staeheli, L. A. (2011). 'Political Geography: Where's Citizenship?' *Progress in Human Geography* 35 (3): 393–400. doi:10.1177/0309132510370671.
- Stevenson, O. and Woolnough, P. (2016) 'Geographies of Missing People: Improving Police Knowledge and Response to Missing Persons' in *Handbook of Missing Persons*, pp. 127-143.
- Stevenson, O; Parr, H; Woolnough, P; Fyfe, N; (2013) *Geographies of Missing People: Processes, Experiences, Responses* [Report Online]. University of Glasgow, Glasgow, UK. Available at: www.geographiesofmissingpeople.org.uk/downloads/stevenson-et-al.pdf (Accessed: September 2015).
- Stover, E. and Ryan, M. (2001) 'Breaking Bread with the Dead', *Historical Archaeology*, 35(1), pp. 7-25.
- Suchman, L. (2008) 'Feminist STS and the Science of the Artificial', in Hackett, Edward (eds) *The Handbook of Science and Technology Studies*, pp. 139 – 163.
- Tarling, R. and Burrows, J. (2004) "The nature and outcome of going missing: the challenge of developing effective risk assessment procedures", *International Journal of Police Science and Management*, 6, pp. 16-26.
- Taylor, D. (1997) *Disappearing Acts: Spectacles of Gender and Nationalism in Argentina's "Dirty War"*, London: Duke University Press.
- The Commonwealth Member Guide (2016), Countries: United Kingdom, Available at: <http://thecommonwealth.org/our-member-countries/united-kingdom> (Accessed on 27th September, 2016).
- Tomasena, M. (2014). "Gobernanza Forense Ciudadana: La Búsqueda más Dolorosa." *Revista Magis*. Diciembre (December).
- Toom, V. (2015) 'Whose body is it? Technolegal materialization of victims' bodies and remains after the World Trade Center terrorist attacks', *Science, Technology & Human Values*, pp. 686-708.
- Tsou, J.Y., *et.al* (2015) Objectivity in science and Evidence: A legal controversy about the public understanding of science', *Public Understanding of Science* 12, pp.83-103.
- Tutton, R. and Prainsack, B. (2011) 'Enterprising or altruistic selves? Making up research subjects in genetics research', *Sociology of Health and Illness*, 33(7), pp. 1081-1095.

United Nations (2015) "Statement of the UN High Commissioner for Human Rights, Zeid Ra'ad Al Hussein, on his visit to Mexico, October 7th, 2015" – Available at: <http://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=16578&LangID=E#sthash.J5k12UvU.QazdhUde.dpuf> (Accessed: December 2015).

United Nations (2017) *Working Group on Enforced or Involuntary Disappearances*, Available at: <http://www.ohchr.org/EN/Issues/Disappearances/Pages/DisappearancesIndex.aspx>, (Accessed: 15 March 2017).

Vaisman, N. (2014) 'Relational Human Rights: Shed-DNA and the Identification of the 'Living Disappeared' in Argentina', *Journal of Law and Society*, 41(3), pp. 391-415.

Voruz, V. (2011) 'Politics in Foucault's later work: A philosophy of truth; or reformism in question', *Theoretical Criminology*, 15: 47. pp. 321-450

Wagner, S. (2008) *To know where he lies: DNA Technology and the Search for Srebrenica's Missing*, University of California Press.

Walters, T (1996) 'A New Model of Grief: Bereavement and Biography', *Mortality: Promoting the Interdisciplinary Study of Death and Dying*, 1(1), pp. 7-25.

Weizman, E. (2014) 'Introduction: Forensis', in Forensic Architecture (ed.) *Forensis. The Architecture of Public Truth*, Berlin: Sternberg Press, Forensic Architecture, pp. 9 – 32.

Welsh, M. (2013) 'Resilience and Responsibility: Governing Uncertainty in a complex world'. *The Geographical Journal*, pp. 1-12.

White, B. (2013) *Mario Vargas Llosa - PRI Perfect Dictatorship - English Subs*, Available at: <https://www.youtube.com/watch?v=-MdB8mZAFUc> (Accessed: September 2016).

Widmer, S. (2016) 'Experiencing a Personalised Augmented Reality. Users of *Foursquare* in urban space' in Amoores, L. and Piotukh, V. (Eds) 'Algorithmic Life. Calculative devices in the age of big data', p. 62.

Williams, R & Johnson, P (2005). Inclusiveness, Effectiveness and Intrusiveness: Issues in the Developing Uses of DNA Profiling in Support of Criminal Investigations. *Journal of Law Medicine and Ethics* 33(3): 545-558.

Williams, R. (2000) *Making Identity Matter: Identity, Society and Social Interaction*, Taylor and Francis.

Williams, R. and Weinroth, M. (2014) Technological innovations in forensic genetics: social, legal and ethical aspects. *Recent Adv DNA Gene Seq.* 8(2):98-103.

Wolcott, H.F. (1995) *The Art of Doing Fieldwork*, AltaMira Press.

Wright, M. W. (2016) 'Epistemological Ignorances and Fighting for the Disappeared: Lessons from Mexico', *Antipode*, [Preprint], pp. 1-21, doi: 10.1111/anti.12244.

Wynne, B. (1992) 'Misunderstood misunderstanding: Social identities and public uptake of science'. *Public Understanding of Science* 1, pp. 281-304.

Wynne, B. (2005) 'Reflexing complexity: post-genomic knowledge and reductionist returns in public science.' *Theory, Culture and Society*, 22 (5), pp. 67-94.